SHOUT
SHARE
IT

Jno: Ja
184

Ex-libris
Charles Atwood
Kofoid
BMC

1868

THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA

PRESENTED BY
PROF. CHARLES A. KOFOID AND
MRS. PRUDENCE W. KOFOID

A

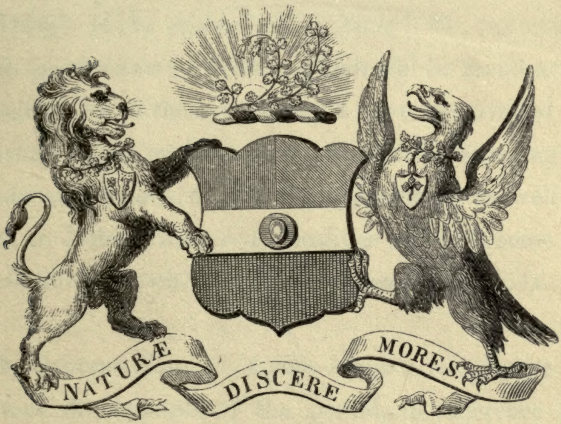
HISTORY

OF

BRITISH BIRDS.

BY

WILLIAM YARRELL, F.L.S. V.P.Z.S.


NATURÆ DISCERE MORES.

ILLUSTRATED BY 535 WOOD-ENGRAVINGS.

IN THREE VOLUMES.—VOL. I.

SECOND EDITION.

LONDON:
JOHN VAN VOORST, PATERNOSTER ROW.
M.DCCC.XLV.

LONDON:
Printed by S. & J. Bentley, Wilson, and Fley,
Bangor House, Shoe Lane.

G7Y3
1845
V. 1
Biol.
Lib.

PREFACE

TO

THE SECOND EDITION.

THE preparation of a second edition of the History of our British Birds enables me to record the occurrence of eleven species new to Britain, which will be found arranged in their places in these volumes; I have also availed myself of several recent ornithological publications referring to the islands and shores of the Mediterranean, as well as to India, to include numerous localities in which some of our British Birds are either resident or seasonal visiters.

The SPOTTED EAGLE. *Aquila nævia*; vol. i. page 10.*

From the lateness of the period, in reference to the printing of these volumes, at which the occurrence of two examples of this species in Ireland became known to me, I was only able to introduce a figure and a short notice on a single leaf in its place among the Eagles. The further particulars here inserted may prove acceptable.

This Eagle, very similar in its appearance to our well-known Golden Eagle, but almost one-third smaller in size, inhabits the Apennines and other mountains of central Europe. It is *le petit Aigle ou Aigle tacheté* of the Animal

M354465

Kingdom of Baron Cuvier, who mentions that it was so tractable as to be employed in Falconry, but would only attack small or weak animals, and was otherwise deficient in courage. M. Vieillot includes this species in his Birds of France, and mentions that it preys upon pigeons, rats, and particularly upon ducks, from which latter circumstance it has been called *anataria.* It builds on high trees, laying two whitish eggs, slightly streaked with red, and it feeds on small quadrupeds and birds.

This species has been killed in Belgium, and is included by MM. Meyer, Brehm, and Naumann in their histories of the Birds of Germany; it is found also in Russia and Siberia, but not, I believe, in Denmark, Sweden, or Norway.

South of the countries of Europe first mentioned, this Eagle is found in Provence according to Polydore Roux and M. Schembri; and M. Savi includes it in his Birds of Italy. M. Malherbe says this species inhabits the centre of Sicily. One nest was discovered, containing two Eaglets and a mass of bones and skeletons of rabbits and reptiles; but that which created the greatest surprise was, to find underneath this large nest seven nests of the Tree Sparrow, containing eggs and young birds; and these little Finches seemed to apprehend no danger in establishing themselves thus near the habitation of so formidable an enemy.

This Eagle is not found in Malta, but is said to inhabit North Africa, and is included by M. Savigny in his Birds of Egypt under the name of *Aquila melanaetos.*

M. Ménétries, the Russian naturalist, in his catalogue of the zoological subjects obtained by him in the vicinity of Mount Caucasus, says, page 27, "I killed on the mountains of Talyche an adult example of this species, which had almost entirely lost the spots observed upon it when it is young."

Aquila nævia has been obtained by B. Hodgson Esq., in Nepal, and by Mr. Blyth near Calcutta; skins were in the collection made by Mr. Ewer in the north-western province of the Bengal territory, and also in that of Major Franklin.

The young bird in its first year has the bill of a dark bluish-horn colour, becoming lighter in colour towards the base, the cere yellow; irides hazel; the whole head, neck, back, wings, and tail dark chocolate brown; the tips of all the small and large wing-coverts marked with a crescentic patch of pale wood-brown; the tertials, upper tail-coverts, and tail-feathers, the same; under surface of the body dark brown, the feathers of the thighs and legs varied with paler brown lines; the legs feathered down to the tarsal joint; the toes yellow, reticulated for a portion of their length, but ending with four large and broad scales; the claws nearly black.

The young bird in its second year, as figured by Mr. Gould in his Birds of Europe, is more uniform in its colour than the bird here represented, but has some of the smaller wing-coverts, the greater coverts, and the tertials tipped with light brown, the general colour dark reddish-brown.

An adult bird had the neck, back, wing-coverts and tail reddish liver brown; the head, both above and below, rather lighter in colour, the feathers of the upper part of the head and neck lanceolate; the primaries almost black; under surface of the body very little lighter in colour than the back; all the feathers white at the base; legs, toes, and claws as in the young bird.

The whole length twenty-seven and a half inches; the wing, from the anterior joint, twenty-three and a half inches; the fourth and fifth quill-feathers nearly equal in length, but the fifth rather the longest in the wing. The wings when closed reach to the end of the tail.

Willughby, in his Ornithology, has accurately described this species at page 63, under the name of the *Morphno congener* of Aldrovandus; and adds, that "this bird took the name of *Morphnos* from the spots of the feathers, whence also it may in Latine not unfitly be called *nævia*."

The young bird is the *Falco nævius* and *maculatus* of Gmelin.

The WHITE-WINGED CROSSBILL. *Loxia leucoptera;* vol. ii. page 28.

At the evening meeting of the Zoological Society on Tuesday, Sept. 23rd, 1835, Edward Fitton Esq., exhibited a fine male of this species in its red plumage, which he had picked up dead upon the shore at Exmouth on the 17th inst. The bird appeared to have been injured on the back of the head, and had crept into a hole in one of the loose fragments of rock on the shore, where it was found by Mr. Fitton, partly covered with wet sand.

The wind at the time was south-west, and had been blowing hard from north-west to west and south-west for some days.

The SWALLOW. *Hirundo rustica ;* vol. ii. page 231.

"A Swallow was shot the other day at Salterhebble, near this town, (Halifax, Yorkshire,) and upon examining the little bird, a small piece of parchment was found tied to one of its legs. The parchment is about one and a half inches in length, and an eighth of an inch wide. Upon one side is written 'J. Rovina, y Clavi ;' and upon the reverse, 'Barcelona, 10th March, 1845.'"—*Morning Post,* 22nd July, 1845. Copied from the *Halifax Guardian.*

In an account of Madeira by T. M. Hughes, Esq., recently published, it is stated as an interesting test of the mildness of the climate, that Swallows do not migrate from the island.

BUFF-BREASTED SANDPIPER. *Tringa rufescens ;* vol. iii. page 57.

I omitted to notice the occurrence of this species in Ireland, as recorded by Mr. Frederick M'Coy in the Annals of Natural History, vol. xv. page 271, in the following terms:

"A specimen of this rare bird, shot by J. Hill, Esq., near the Pigeon House, Dublin, is preserved in the Museum of the Natural History Society of Dublin.

The specimen is in the same plumage as those described by Mr. Yarrell; the markings on the under side of the wings are very beautiful. The specimen noticed is the only Irish one I am aware of."

Steller's Western Duck. *Somateria dispar*; vol. iii. page 305.

George N. Cozens, Esq., of Weston Lodge, near Derby, sent me word that on the 15th of August 1835, he shot a Duck of this species while it was sitting on the sea just off the rocks of the promontory called Filey Bridge, six or seven miles south of Scarborough. The bird was alone. Mr. Cozens very obligingly sent the skin for my examination. It proved to be that of a male, but, like some other males in this family, exhibited the plumage of the female over the head and neck; but the autumn moult having commenced, the white feathers about the head, and the black feathers on the chin and on the bottom of the neck behind, which distinguish the adult male, were just beginning to make their appearance, forming an interesting state of change.

The Masked Gull. *Larus capistratus;* vol. iii. page 547.

Of this bird, M. H. Schlegel, in his Critical Review of the Birds of Europe, published at Leyden in 1844, has the following remarks at page 113, under the name of *Larus ridibundus minor*:

"This Gull is only distinguished from the Laughing

Gull (*Larus ridibundus* of this work, vol. iii. page 550,) by having a smaller and weaker bill, shorter tarsus and toes, as well as interdigital membranes of less extent. M. Temminck has for a long time possessed one example brought by a whaler. It has been met with in Scotland. M. Bruch has observed it many seasons in succession, about the period of its migration, on the banks of the Rhine; he tells me that it arrives there before the Laughing Gull, from which he distinguishes it by a slight difference in the voice. The Marquis of Durazzo has received one specimen that was killed in the vicinity of Genoa, and M. de Feldegg brought one from Dalmatia. M. Verreaux sent us one specimen from the Cape of Good Hope: it has been killed near Dunkirk, and on the coast of Holland. These facts seem in favour of the opinion that this Gull is of a particular race, different from the Laughing Gull. It appears, however, that these two races sometimes pair one with the other, or that they breed in company, because I killed in the summer of 1843, upon a lake near Leyden, two pair of Gulls that were nesting there, one male bearing all the characters of the true *L. ridibundus*, while the female belonged to the small race of this species."

The next observations are copied from the printed Proceedings of the Zoological Society for May 27th, 1845:

" Mr. Thompson of Belfast read a paper to prove that the *Larus capistratus*, Temm., is not a distinct species from *L. ridibundus*, and exhibited a series of specimens of both forms in different states of plumage obtained in the neighbourhood of Belfast. The differences between these supposed species are—

"1st. In size; but a female specimen of *L. ridibundus*, with black *hood*, bill and legs arterial blood-red, was exhibited, agreeing in the size of body, tarsi, &c. with *L. capistratus*.

"2nd. The colour of the tarsi and toes attributed to *L. capistratus*, and as distinguishing it from *L. ridibundus*, is a mere transition shade, through which all individuals of the latter pass before the arterial blood-red hue is attained.

"3rd. The disposition of black or brown on the head, its taking the form of a mask, as in *L. capistratus*, or as a hood, as in *L. ridibundus*, is either transitional or accidental,* and the shade of colour commonly varies from the 'brocoli-brown' of the former to the deeper tint of the ordinary *L. ridibundus*.

"A specimen of the *L. capistratus*, purchased at the sale of Bullock's collection by Dr. Leach, and believed to have been one of the first birds seen by Temminck, to which he gave this name, is now in the British Museum. By the kindness of Mr. George R. Gray, I made a critical comparison of this bird with the specimen now exhibited, and, excepting in the smaller size of the toes and webs of feet, there was no difference between it and some of them; and from the adult female, *L. ridibundus*, in full summer plumage it differed in the most trivial manner only.

---

* I have known it to be both transitional and accidental, *i.e.* for birds to exhibit the mask the *first* summer of their attaining adult plumage, and others the hood in their first assumption of the black hood."

This subject appearing to require further investigation, I have not removed the Masked Gull from a place among its generic companions in this work. I saw two examples of the Masked Gull this last spring, both of them birds that were two years old, then about to breed for the second time, but measuring only twelve inches and a half in length from the point of the beak to the end of the tail, which was entirely white. Arthur Strickland, Esq., of Burlington Quay, has favoured me with the measurements of a Masked Gull in his collection, which are as follows:—From the point of the beak to the commencement of the feathers on the top of the beak, one inch and three-sixteenths; from the point of the beak to the end of the tail, thirteen inches; wing, from the anterior joint to the end of the longest quill-feather, eleven inches and three-fourths; length of tarsus one inch and a half; middle toe and nail one inch and a half.

A Supplement, containing figures and descriptions of the species obtained since the publication of the first edition, has been prepared.

Ryder Street, St. James,
Oct. 1845.

and I beg to return my sincere thanks to all contributors for the very numerous and interesting communications with which I have been so generously supplied.

To Mr. Alexander Fussell, for the ability, invention, and good taste which have enabled him to give truth of character, variety, and effect to nearly five hundred of the drawings on wood here employed, my best acknowledgments are due; and more particularly so to Mr. John Thompson and his sons, for the skill, the zeal, the success, and I may add the pleasure, with which they have laboured throughout this very long series of engravings; while the attractive appearance of the work has been greatly increased by the care and attention bestowed on the printing at the establishment of Messrs. Bentley, Wilson, and Fley.

Lastly, I beg to express my gratification, and record my grateful thanks to all my liberal friends and subscribers for the encouraging opinions, and the valuable support, with which these volumes have been received.

Ryder Street, St. James,
May, 1843.

INDEX.

A.

VOL. PAGE

Aberdevine, the i. 544
Accentor, Alpine i. 239
Accentor alpinus i. 239
Accentor, Hedge i. 243
Accentor modularis i. 243
Accipiter fringillarius i. 67
„ *nisus* i. 67
„ *palumbarius* i. 62
African Heron ii. 514
Agelaius phœniceus ii. 35
Alauda alpestris i. 440
„ *arborea* i. 459
„ *arvensis* i. 447
„ *brachydactyla* i. 463
„ *campestris* i. 432
„ *cristata* i. 455
„ *minor* i. 422
„ *obscura* i. 432
„ *pratensis* i. 427
„ *trivialis* i. 422, 427
Alca alle iii. 465
„ *arctica* iii. 469
„ *impennis* iii. 476
„ *pica* iii. 473
„ *torda* iii. 473
Alcedo ispida ii. 223
Alp, a name for the Bullfinch i. 574
Alpine Accentor i. 239
„ Swift ii. 266
Aluco flammea i. 133
American Bittern ii. 545
„ Cuckoo ii. 204
„ Martin ii. 257
„ Quail ii. 391
„ Scaup Duck iii. 347

VOL. PAGE

American Wigeon iii. 292
Ammer, Yellow i. 490
Ampelis garrulus i. 388
Anas acuta iii. 253
„ *albifrons* iii. 157
„ *Americana* iii. 292
„ *anser* iii. 140
„ *bernicla* iii. 164
„ *boschas* iii. 264
„ *Canadensis* iii. 181
„ *clangula* iii. 368
„ *clypeata* iii. 242
„ *crecca* iii. 281
„ *cygnus* iii. 187
„ *dispar* iii. 305
„ *Egyptiaca* iii. 173
„ *erythropus* iii. 161
„ *ferina* iii. 332
„ *ferruginea* iii. 337
„ *fuligula* iii. 351
„ *fusca* iii. 312
„ *gambensis* iii. 177
„ *glacialis* iii. 355
„ *glaucion* iii. 368
„ *glocitans* iii. 260
„ *histrionica* iii. 363
„ *leucophthalmos* iii. 337
„ *leucopsis* iii. 161
„ *marila* iii. 341
„ *mollissima* iii. 297
„ *nigra* iii. 317
„ *nyroca* iii. 337
„ *olor* iii. 205
„ *penelope* iii. 286
„ *perspicillata* iii. 322
„ *querquedula* iii. 277

C.

VOL. PAGE
Calamophilus biarmicus . i. 381
Calidris arenaria . . ii. 491
„ *canutus* . . iii. 52
Canada Goose . . . iii. 181
„ Owl . . . i. 146
Capercaillie, the . . ii. 323
Caprimulgus Europeus . ii. 270
Carbo cormoranus . . iii. 480
Carduelis elegans . . i. 538
„ *spinus* . . i. 544
Carrion Crow . . ii. 78
Carr-swallow, the Black Tern.
Caryocatactes nucifraga ii. 125
Caspian Tern . . . iii. 493
Castaneous Duck . . iii. 337
Cataractes parasiticus . iii. 611
„ *pomarinus* . iii. 606
„ *vulgaris* . . iii. 602
Cathartes percnopterus . i. 6
Cephus grylle . . . iii. 462
Certhia familiaris . . ii. 165
Chaffinch, the . . . i. 507
Channel Goose . . iii. 489
Chantrey, Sir Fras., and Woodcocks . . . iii. 17
Charadrius calidris . ii. 491
„ *cantianus* . . ii. 469
„ *hiaticula* . ii. 465
„ *himantopus* . ii. 629
„ *minor* . . ii. 473
„ *morinellus* . ii. 455
„ *œdicnemus* . ii. 436
„ *pluvialis* . ii. 447
Chasse aux Grebes . iii. 404
„ „ Macreuses . iii. 319
Chatterer, the . . i. 388
Chauliodus strepera . . iii. 249
Chenalopex Egyptiaca . iii. 173
Chiff Chaff . . . i. 335
Chimney Swallow . ii. 231
Chough, the . . . ii. 54
Chroicocephalus capistratus iii. 547
„ *minutus* . iii. 543
Ciconia alba . . . ii. 554
„ *nigra* . . . ii. 558

VOL. PAGE
Cinclus aquaticus . . i. 181
Cinereous Eagle . . i. 20
„ Godwit . . ii. 618
„ Shearwater . iii. 624
Circus cineraceus . . i. 107
„ *cyaneus* . . i. 101
„ *æruginosus* . . i. 97
„ *Montagui* . . i. 107
„ *rufus* . . . i. 97
Cirl Bunting . . i. 495
Clangula albeola . . iii. 374
„ *chrysophthalmos* . iii. 368
„ *glacialis* . . iii. 355
„ *histrionica* . iii. 363
„ *vulgaris* . . iii. 368
Clap-net . . . i. 555
Cob, the Great Black-backed Gull.
Cob, the male Swan.
Coccothraustes chloris . i. 527
„ *vulgaris* . i. 531
Coccyzus Americanus . ii. 204
Cock of the Wood . ii. 323
Cole Tit . . . i. 369
Colin, Virginian . . ii. 391
Collared Pratincole . . ii. 441
Columba œnas . . ii. 283
„ *livia* . . . ii. 288
„ *migratoria* . ii. 304
„ *palumbus* . . ii. 277
„ *turtur* . . ii. 299
Colymbus arcticus . . iii. 434
„ *glacialis* . iii. 425
„ *immer* . . iii. 425
„ *septentrionalis* iii. 441
„ *stellatus* . . iii. 441
Common Bittern . . ii. 539
„ Bullfinch . . i. 574
„ Bunting . . i. 479
„ Buzzard . . i. 82
„ Coot . . iii. 123
„ Cormorant . iii. 480
„ Creeper . . ii. 165
„ Crossbill . . ii. 1
„ Curlew . . ii. 577
„ Dipper . . i. 181
„ Gallinule . iii. 114

VOL. PAGE

Common Gannet . . iii. 489
„ Grosbeak . i. 531
„ Guillemot . . iii. 450
„ Gull . . . iii. 570
„ Heron . . ii. 508
„ Linnet . . i. 550
„ Partridge . . ii. 370
„ Quail . . ii. 400
„ Rail . . . iii. 110
„ Redpole . i. 562
„ Redshank . . ii. 591
„ Rotche . . iii. 465
„ Sandpiper . . ii. 607
„ Scoter Duck . . iii. 317
„ Scraber . . iii. 462
„ Shelldrake . iii. 235
„ Skua . . iii. 602
„ Snipe . . iii. 25
„ Starling . . ii. 40
„ Storm Petrel . iii. 647
„ Tern . . iii. 504
„ Whitethroat . i. 316
„ Wigeon . . iii. 286
Conirostres . . . i. 440
Coot, the . . . iii. 123
Coracias garrula . . ii. 211
Cormorant, the Common iii. 480
„ the Crested . iii. 480
„ the Green . iii. 486
Corncrake, the . . iii. 92
Cornish Chough . . ii. 54
„ Daw . . . ii. 54
Corvus caryocatactes . ii. 125
„ *corax* . . . ii. 61
„ *cornix* . . ii. 82
„ *corone* . . . ii. 78
„ *frugilegus* . . ii. 91
„ *glandarius* . . ii. 119
„ *graculus* . . ii. 54
„ *monedula* . . ii. 103
„ *pica* . . . ii. 109
Corythus enucleator . . i. 581
Coturnix dactylisonans . ii. 400
„ *Marylanda* . . ii. 391
„ *vulgaris* . ii. 400
Coulterneb, the Puffin . iii. 469

VOL. PAGE

Courser, Cream-coloured ii. 431
Cracker, the . . . iii. 253
Crake Baillon's . . iii. 106
„ Gallinule . . iii. 92
„ Little . . iii. 101
„ Spotted . . . iii. 97
Crane, the . . . ii. 501
Cravat Goose . . . iii. 181
Cream-coloured Courser . ii. 431
„ „ Plover . ii. 431
„ „ Swiftfoot ii. 431
Creeper, the . . . ii. 165
Crested Cormorant . iii. 480
„ Lapwing . . ii. 481
„ Lark . . . i. 455
„ Tit . . . i. 366
Crex Baillonii . . iii. 106
„ *porzana* . . . iii. 97
„ *pratensis* . . iii. 92
„ *pusilla* . . . iii. 101
Crossbill, Common . ii. 1
„ Parrot . . ii. 24
„ White-winged ii. 28
Crow, Carrion . . ii. 78
„ Hooded . . ii. 82
„ Hybrid . . ii. 86
„ Red-legged . ii. 54
„ Royston . . ii. 82
Cuckoo, American . . ii. 204
„ Common . ii. 189
„ Great-spotted . ii. 200
„ Mate . . ii. 158
Cuculus canorus . . ii. 189
„ *glandarius* . ii. 200
Curlew, Common . . ii. 577
„ Pigmy . . iii. 47
„ Sandpiper . . iii. 47
„ Stone . . ii. 436
„ Tringa . . iii. 47
Curruca arundinacea . i. 295
„ *atricapilla* . . i. 307
„ *cinerea* . . i. 316
„ *hortensis* . . i. 312
„ *locustella* . . i. 285
„ *luscinia* . . i. 300
„ *Provincialis* . i. 340

VOL. PAGE
Curruca salicaria . . i. 289
„ *sibilatrix* . . i. 324
„ *sylviella* . . i. 320
Cursorius Europeus . ii. 431
„ *Isabellinus* . . ii. 431
Cushat, the Woodpigeon ii. 277
Cygnus Bewickii . . iii. 194
„ *ferus* . . . iii. 187
„ *immutabilis* . . iii. 225
„ *mansuetus* . . iii 205
„ *olor* . . . iii. 205
Cypselus alpinus . . ii. 266
„ *apus* . . . ii. 260
„ *murarius* . . ii. 260
„ *Africanus* . . ii. 266

D.

Dabchick, the . . iii. 420
Dafila caudacuta . . iii. 253
Dalmatian Regulus . i. 355
Dartford Warbler . . i. 340
Decoys . . iii. 266, and 268
Dentirostres . . . i. 156
Didapper . . . iii. 420
Dipper, the . . . i. 181
Diver, Black-throated . iii. 434
„ Great Northern . iii. 425
„ Red-throated . iii. 441
„ Ring-necked . iii. 425
„ Speckled . . iii. 441
Domestic Swan . . iii. 205
Dotterel, the . . ii. 455
Double Snipe . . iii. 18
Dove, Ring . . . ii. 277
„ Rock . . . ii. 288
„ Stock . . . ii. 283
„ Turtle . . ii. 299
Duck, Bimaculated . iii. 260
„ Buffel-headed . iii. 374
„ Burrow . . iii. 235
„ Eider . . iii. 297
„ Ferruginous . . iii. 337
„ Gadwall . . iii. 249
„ Golden Eye . . iii. 368
„ Harlequin . . iii. 363

VOL. PAGE
Duck, King . . . iii. 308
„ Long-tailed . . iii. 355
„ Pintail . . . iii. 253
„ Red . . . iii. 337
„ Red-crested . . iii. 327
„ St. Cuthbert's . iii. 297
„ Scaup . . . iii. 341
„ Scaup of America iii. 347
„ Steller's . . . iii. 305
„ Tufted . . iii. 351
„ Velvet . . . iii. 312
„ Western . . iii. 305
„ White-eyed . . iii. 337
„ Wild . . . iii. 264
Dunbird, the . . . iii. 232
Dundiver, the . . iii. 395
Dunlin, the . . . iii. 81
Dunnock, the . . i. 243
Dusky Grebe . . iii. 411
„ Lark . . . i. 432
„ Sandpiper . . ii. 587
„ Shearwater . . iii. 624

E.

Eagle, Cinereous . i. 20
„ Golden . . . i. 11
„ Owl . . i. 114
„ Ring-tailed . . i. 11
„ Rough-footed . i. 10*
„ Sea . . . i. 20
„ Spotted . . i. 10*
„ White-tailed . . i. 20
Ear of Owls . . . i. 127
Eared Grebe . . . iii. 417
Ectopistis migratorius . ii. 304
Edible nest of Chinese Swallow ii. 256
Egret, Buff-coloured . ii. 530
„ Great . . . ii. 518
„ Buff-backed . ii. 526
„ Little . . . ii. 522
Egyptian Goose . . iii. 173
„ Neophron . . i. 6
„ Vulture . i. 6
Eider Duck . . . iii. 297
Elanus furcatus . . i. 77

VOL. PAGE
Elk, the Swan iii. 187
Emberiza chlorocephala i. 502
„ *cirlus* i. 495
„ *citrinella* i. 490
„ *glacialis* i. 470
„ *hortulana* i. 502
„ *Lapponica* i. 465
„ *miliaria* i. 479
„ *montana* i. 470
„ *mustelina* i. 470
„ *nivalis* i. 470
„ *schœniclus* i. 484
Erne, the i. 20
Erythaca rubecula i. 247
Eyes of birds i. 15, 19, and 145

F.

Falco albicilla i. 20
„ *apivorus* i. 91
„ *buteo* i. 82
„ *chrysaetos* i. 11
„ *cineraceus* i. 107
„ *cyaneus* i. 101
„ *æruginosus* i. 97
„ *æsalon* i. 53
„ *fulvus* i. 11
„ *gyrfalco* i. 31
„ *haliæetus* i. 25
„ *hyemalis* i. 107
„ *Islandicus* i. 31
„ *lagopus* i. 87
„ *milvus* i. 71
„ *nisus* i. 67
„ *palumbarius* i. 62
„ *peregrinus* i. 37
„ *rufipes* i. 49
„ *subbuteo* i. 45
„ *tinnunculus* i. 57
Fallow Chat i. 276
Feathers, growth of i. 217
Ferruginous Duck iii. 337
Ficedula Suecica i. 254
„ *tithys* i. 264
Fieldfare, the i. 198
Fieldlark, the i. 447

VOL. PAGE
Field Titling i. 422
Finch, Bramble i. 512
Finch, Mountain i. 512
Fire-crested Regulus i. 351
„ „ Wren i. 351
Fishing with Cormorants iii. 485
Fissirostres ii. 211
Flight, powers of, i. 112, and 137
Flycatcher, Pied i. 177
„ Spotted i. 172
Food, influence of, on plumage i. 580
Food of the Israelites ii. 403
Foolish Guillemot iii. 450
Forked-tailed Petrel iii. 643
Fratercula arctica iii. 469
Freckled Heron ii. 545
Fregilus graculus ii. 54
French Pie ii. 148
Fringilla Borealis i. 556
„ *cannabina* i. 550
„ *carduelis* i. 538
„ *chloris* i. 527
„ *coccothraustes* i. 531
„ *cœlebs* i. 507
„ *domestica* i. 521
„ *linaria* i. 562
„ *linota* i. 550
„ *montana* i. 516, 569
„ *montifringilla* i. 512
„ *montium* i. 569
„ *spinus* i. 544
Fulica atra iii. 123
„ *chloropus* iii. 114
Fuligula albeola iii. 374
„ *clangula* iii. 368
„ *cristata* iii. 351
„ *dispar* iii. 305
„ *ferina* iii. 332
„ *glacialis* iii. 355
„ *histrionica* iii. 363
„ *marila* iii. 341
„ *mariloides* iii. 347
„ *nyroca* iii. 337
„ *rufina* iii. 327
Fulmar Petrel iii. 619
Furze Chat i. 272

G.

	VOL.	PAGE
Gadwall Duck	iii.	249
Gallinula Baillonii	iii.	106
,, *chloropus*	iii.	114
,, *crex*	iii.	92
,, *Foljambei*	iii.	101
,, *minuta*	iii.	101
,, *porzana*	iii.	97
,, *pusilla*	iii.	101
Gallinule, Baillon's	iii.	106
,, Common	iii.	114
,, Little	iii.	101
,, Olivaceous	iii.	101
Gambo Goose	iii.	177
Gannet, the	iii.	489
Gapes, mode of curing	ii.	313
Gardenian Heron	ii.	549
Garden Warbler	i.	312
Garganey Duck	iii.	277
Garrot, Buffel-headed	iii.	374
,, Golden-eyed	iii.	368
Garrulus glandarius	ii.	119
Gibraltar Quail	ii.	408
Glareola Austriaca	ii.	441
,, *pratincola*	ii.	441
,, *torquata*	ii.	441
Glaucous Gull	iii.	595
Glead, the	i.	71
Glossy Ibis	ii.	571
Godwit, Bar-tailed	ii.	641
,, Black-tailed	ii.	634
Golden Eagle	i.	11
,, eyed Duck	iii.	368
,, crested Regulus	i.	346
,, ,, Warbler	i.	346
,, ,, Wren	i.	346
,, crowned Wren	i.	346
,, Oriole	i.	227
,, Plover	ii.	447
Goldfinch, the	i.	538
Goosander, the	iii.	395
,, Red-breasted	iii.	389
Goose, Bean	iii.	148
,, Bernicle	iii.	161
,, Brent	iii.	164

	VOL.	PAGE
Goose, Canada	iii.	181
,, Channel	iii.	489
,, Cravat	iii.	181
,, Egyptian	iii.	173
,, Gambo	iii.	177
,, Grey-lag	iii.	140
,, Laughing	iii.	157
,, Pink-footed	iii.	153
,, Red-breasted	iii.	170
,, Ruddy	iii.	230
,, Soland	iii.	489
,, Solent	iii.	489
,, Spur-winged	iii.	177
,, White-fronted	iii.	157
,, Wild	iii.	140
Goshawk, the	i.	62
Grallatores	ii.	431
Grasshopper Warbler	i.	285
Great Auk	iii.	476
,, Black-backed Gull	iii.	591
,, Black Woodpecker	ii.	132
,, Bustard	ii.	415
,, Crested Grebe	iii.	400
,, Egret	ii.	518
,, Imber Diver	iii.	425
,, Northern Diver	iii.	425
,, Plover	ii.	436
,, Snipe	iii.	18
,, Spotted Woodpecker	ii.	148
,, Tit	i.	358
,, White Heron	ii.	518
Greater Pettychaps	i.	312
,, Shearwater	iii.	624
,, Spotted Woodpecker	ii.	148
Grebe, Dusky	iii.	411
,, Eared	iii.	417
,, Great-crested	iii.	400
,, Horned	iii.	411
,, La Chasse aux	iii.	404
,, Little	iii.	420
,, Red-necked	iii.	407
,, Sclavonian	iii.	411
,, Tippet	iii.	400
Green Cormorant	iii.	486
,, Finch	i.	527
,, Grosbeak	i.	527

VOL. PAGE
Green-headed Bunting . i. 502
" Lapwing . . ii. 481
" Plover . . . ii. 447
" Sandpiper . . ii. 595
" Shank, the . . ii. 618
" Woodpecker . ii. 137
Grey-headed Wagtail . i. 412
" lag Goose . . iii. 140
" Phalarope . . iii. 130
" Plover . . . ii. 477
" Shrike . . . i. 156
" Snipe . . . iii. 43
" Wagtail . . . i. 407
Griffon Vulture . . i. 1
Grosbeak, Common . . i. 531
" Pine . . i. 581
Grouse, Black . . . ii. 340
" Red. . . ii. 351
" Wood . . . ii. 323
Grus cinerea . . ii. 501
Guernsey Partridge . . ii. 381
Guillemot, Black . . iii. 462
" Bridled . . iii. 458
" Brunnich's . iii. 455
" Common . . iii. 450
" Foolish . iii. 450
" Lesser . . iii. 450
" Ringed . iii. 458
" Spotted . . iii. 462
" Thick-billed . iii. 455
Gull, Arctic . . . iii. 616
" Black-headed . iii. 550
" Black-winged . . iii. 557
" Brown-headed . iii. 550
" Common . . . iii. 570
" Glaucous . . iii. 595
" Great Black-backed . iii. 591
" Herring . . iii. 588
" Hooded . . . iii. 550
" Iceland . . iii. 575
" Ivory . . . iii. 567
" Kittiwake . . iii. 562
" Large white-winged . iii. 595
" Laughing . . iii. 550 & 557
" Lesser black-backed iii. 583
" Lesser white-winged iii. 575

VOL. PAGE
Gull, Little . . . iii. 543
" Masked . . iii. 547
" Pomerine . . iii. 606
" Red-legged . . iii. 550
" Sabine's . . . iii. 537
" Skua . . . iii. 602
" Tarrock . . . iii. 562
" Wagel . . . iii. 591
" Winter . . . iii. 570
" Yellow-legged . iii. 583
Gull-billed Tern . . iii. 515
Gyrfalco candicans . i. 31
Gyrfalcon . . . i. 31

H.

Hackbolt . . . . iii. 624
Hæmatornis chrysorhæus . i. 224
Hagdown . . . iii. 624
Haliæetus albicilla . . i. 20
Harelda glacialis . . iii. 355
Harlequin Duck . . iii. 363
Harrier, Hen . . i. 101
" Marsh . . i. 97
" Montagu's . i. 107
" Ring-tailed . . i. 101
Hawfinch, the . . i. 531
Haw Grosbeak . . i. 531
Hawk, fishing, the . i. 25
Hawking i. 17, 41, 63, 68, 73,
and ii. 111
Hawk Owl . . . i. 146
Hay-tit . . . i. 329
Hebridal Sandpiper . . ii. 486
Hedge Accentor . . i. 243
" Sparrow . . i. 243
" Warbler . . . i. 243
Hemipode Andalusian . ii. 408
Hemipodius lunatus . ii. 408
" *tachydromus* ii. 408
Hen Harrier . . . i. 101
Hernshaw . . . ii. 508
Heron, Freckled . . ii. 545
Heron and Eel . . ii. 553
Heronshaw . . . ii. 508

VOL. PAGE
Heron, African . . ii. 514
„ Buff-backed . . ii. 526
„ Common . . ii. 508
„ Gardenian . . ii. 549
„ Great White . ii. 518
„ Little White Heron ii. 526
„ Night . . ii. 549
„ Purple . . . ii. 514
„ Squacco . . ii. 530
Heronries, Catalogue of . ii. 511
Herring Gull . . iii. 588
Hew-hole, the . . . ii. 137
Hickwall . . . . ii. 154
Himantopus melanopterus . ii. 629
„ *Plinii* . ii. 629
Hirundo apus . . . ii. 260
„ *pratincola* . ii. 441
„ *purpurea* . . ii. 257
„ *riparia* . . ii. 251
„ *rustica* . . ii. 231
„ *urbica* . . . ii. 245
Hobby, the . . . i. 45
Hœmatopus ostralegus . ii. 496
Honey Buzzard . . i. 91
Hooded Crow . . ii. 82
„ Merganser . . iii. 383
Hooper, the . . . iii. 187
Hoopoe, the . . . ii. 175
Horned Grebe . . iii. 411
House Sparrow . . i. 521
Hybrids, i. 545, 577. ii. 86, 87, 317, 335, 344, 347, 349, 383. iii. 147, 152, 162, 174, 183, 207, 227, 246, 256, 273, 278, 290, 334, 338.

I.

Ibis falcinellus . . . ii. 571
„ *Glossy* . . . ii. 571
Iceland Falcon . . . i. 31
„ Gull . . iii. 575
Icterus phœniceus . . ii. 35
Imber, Great . . iii. 425
„ Lesser . . . iii. 434

VOL. PAGE
Influence of food on plumage i. 580
Insessores . . . i. 156
Israelites, food of, . . ii. 403
Ivory Gull . . . iii. 567

J.

Jackdaw, the . . . . ii. 103
Jacksaw . . . iii. 389, 395
Jack Snipe . . . iii. 33
Jadreka Snipe . . ii. 634
Jager, Arctic . . . iii. 616
Jay, the . . . . ii. 119
Judcock, the Jack Snipe . iii. 33

K.

Kentish Plover . . ii. 469
Kestril, the . . . i. 57
King Duck . . . iii. 308
Kingfisher, the . . ii. 223
Kinglet, the . . . i. 346
Kite, the Fork-tailed . i. 71
„ Swallow-tailed . i. 77
Kittiwake Gull . . iii. 562
Knot, the . . . iii. 52

L.

Lagopus mutus . . . ii. 359
„ *scoticus* . . ii. 351
„ *vulgaris* . . ii. 359
Landrail, the . iii. 92
Lanius collurio . . . i. 161
„ *excubitor* . . i. 156
„ *rufus* . . . i. 167
„ *rutilus* . . i. 167
Lapland Bunting . . i. 465
Lapwing, the . . ii. 481
Large White-winged Gull . iii. 595
Lark, Crested . . i. 455
„ Shore . . . i. 440
„ Short-toed . . i. 463
„ Sky . . . i. 447
„ Wood . . i. 459

VOL. PAGE
Larus argentatus . . iii. 588
„ *atricilla* . . iii. 557
„ *candidus* . . iii. 567
„ *canus* . . . iii. 570
„ *capistratus* . . iii. 547
„ *cataractes* . . iii. 602
„ *cinerarius* . . iii. 550
„ *crepidatus* . . iii. 611
„ *eburneus* . . . iii. 567
„ *erythropus* . . iii. 550
„ *fuscus* . . . iii. 583
„ *glaucoides* . . iii. 575
„ *glaucus* . . . iii. 595
„ *hyburneus* . . iii. 570
„ *Islandicus* . . iii. 575
„ *leucopterus* . . iii. 575
„ *marinus* . . . iii. 591
„ *minutus* . . iii. 543
„ *nævius* . . . iii. 591
„ *parasiticus* . . iii. 611
„ *ridibundus* . . iii. 550
„ *rissa* . . . iii. 562
„ *Sabini* . . . iii. 537
„ *tridactylus* . . iii. 562
Laughing Goose . . iii. 157
„ Gull . iii. 550 & 557
Leach's Petrel . . . iii. 643
Least Spotted Woodpecker ii. 154
„ Willow Wren . i. 335
Lesser Black-backed Gull . iii. 583
„ Guillemot . . iii. 450
„ Imber . . . iii. 434
„ Pettychaps . . i. 335
„ Redpole . . i. 562
„ Spotted Woodpecker ii. 154
„ Tern . . . iii. 519
„ Whitethroat . . i. 320
„ White-winged Gull iii. 575
Lestris Buffonii . . iii. 616
„ *catarractes* . . iii. 602
„ *parasiticus* . . iii. 616
„ *pomarinus* . . iii. 606
„ *Richardsonii* . . iii. 611
„ *striatus* . . iii. 606
Limosa melanura . . ii. 634
„ *rufa* . . . ii. 641

VOL. PAGE
Linaria Borealis . . i. 556
„ *cannabina* . . i. 550
„ *canescens* . . i. 556
„ *minor* . . i. 562
„ *montana* . . i. 569
Ling-bird, the . . i. 427
Linnet, Brown . . i. 550
„ Common . . i. 550
„ Mountain . . i. 569
Linota Borealis . . i. 556
„ *canescens* . . i. 556
„ *cannabina* . . i. 550
„ *linaria* . . . i. 562
„ *montium* . . i. 569
Little Auk . . . . iii. 465
„ Bittern . . ii. 533
„ Black and White Woodpecker . . ii. 154
„ Bustard . . ii. 426
„ Crake . . . iii. 101
„ Egret . . . ii. 522
„ Gallinule . . iii. 101
„ Grebe . . iii. 420
„ Gull . . . iii. 543
„ Horned Owl . i. 120
„ Owl . . . i. 149
„ Ringed Plover . ii. 473
„ Sandpiper . . iii. 66
„ Stint . . . iii. 66
„ Tern . . . iii. 519
„ White Heron . ii. 526
Liverpool, Arms of the Town ii. 572
Lobipes hyberboreus . iii. 135
Locustella avicula . . i. 285
Long-eared Owl . . i. 124
Long-legged Plover . . ii. 629
Long-tailed Duck . . iii. 355
„ „ Hareld . . iii. 355
„ „ Horned Owl i. 124
„ „ Tit . . i. 376
Lough Diver . . . . iii. 378
Loxia, beak of . . ii. 17
„ *chloris* . . . i. 527
„ *cocothraustes* . i. 531
„ *curvirostra* . . ii. 1
„ *enucleator* . . i. 581

VOL. PAGE

Loxia, falcirostra . . ii. 28
„ *leucoptera* . . ii. 28
„ *pityopsittacus* . . ii. 24
„ *pyrrhula* . . i. 574

M.

Machetes pugnax . . ii. 645
Macrorhamphus griseus . iii. 43
Magpie, the . . . ii. 109
Magpie, hawking . . ii. 111
Mallard . . . . iii. 264
Manx Puffin . . . iii. 631
„ Shearwater . . iii. 631
Mareca Americana . iii. 196
„ *Penelope* . . iii. 286
Marsh Harrier . . i. 97
Marsh Tit . . . i. 372
Martin, Bank or Sand . ii. 251
„ the House, or Common ii. 245
„ Purple . . ii. 257
Masked Gull . . . iii. 547
Meadow Crake . . iii. 92
„ Gallinule . . iii. 92
„ Pipit . . i. 427
„ Titling . . i. 427
Mealy Redpole . . i. 556
Mecistura vagans . . i. 376
Melizophilus provincialis i. 340
Merganser, Hooded . . iii. 383
„ Red-breasted iii. 389
Mergoides rufina . . iii. 327
Mergulus melanoleucos . iii. 465
Mergus albellus . . iii. 378
„ *castor* . . iii. 395
„ *cucullatus* . . iii. 383
„ *merganser* . . iii. 395
„ *serrator* . . iii. 389
Merlin, the . . i. 53
Merops apiaster . . ii. 217
Merula iliaca . . i. 207
„ *musica* . . . i. 202
„ *pilaris* . . i. 198
„ *torquatus* . . i. 218

VOL. PAGE

Merula viscivora . . i. 187
„ *vulgaris* . . i. 211
Migratory Pigeon . . ii. 304
Milvus furcatus . . i. 77
„ *regalis* . . . i. 71
„ *vulgaris* . . i. 71
Minute Tringa . . . iii. 66
Mire-drum, the Bittern.
Missel Thrush . . . i. 187
Montagu, Colonel, notice of i. 499
Montagu's Harrier . . i. 107
Moor Buzzard . . i. 97
Moorhen, the . . . iii. 114
Morillon, the . . iii. 368
Mormon fratercula . . iii. 469
Moss-cheeper, the . . i. 427
Motacilla alba . . . i. 403
„ *arundinacea* . i. 295
„ *atricapilla* . . i. 307
„ *boarula* . . i. 407
„ *cinerea* . . i. 316
„ *flava* . . i. 418
„ *hippolais* . . i. 335
„ *hortensis* . . i. 312
„ *luscinia* . . i. 300
„ *modularis* . i. 243
„ *neglecta* . . i. 412
„ *œnanthe* . . i. 276
„ *passerina* . . i. 312
„ *phœnicurus* . i. 259
„ *provincialis* . i. 340
„ *regulus* . . i. 346
„ *rubecula* . . i. 247
„ *rubetra* . . i. 272
„ *rubicola* . . i. 268
„ *salicaria* . i. 289
„ *Suecica* . . i. 254
„ *sylviella* . . i. 320
„ *trochilus* . . i. 329
„ *troglodytes* . ii. 169
„ *Yarrellii* . . i. 395
Mouldy lungs . . iii. 343
Mountain Bunting . . i. 470
„ Finch . . i. 512
„ Linnet . . i. 566
„ Sparrow . i. 516

VOL. PAGE
Moustache Tern iii. 512
Moving eggs or young i. 450
ii. 372, 615. iii. 118.
Mullet Hawk i. 25
Muscicapa atricapilla i. 177
„ *grisola* i. 172
„ *luctuosa* i. 177
Mute Swan iii. 205

N.

Natatores iii. 140
Nauclerus furcatus i. 77
Neophron percnopterus i. 6
Nest-making i. 174, 451, 450.
ii. 170.
Nests, unusual places for, i. 172,
and 247.
Nets i. 555, 587
Nettle-creeper, the Whitethroat.
Night Hawk ii. 270
„ Heron ii. 549
Nightingale, the i. 300
Nightjar, the ii. 270
Noctua funerea i. 146
„ *passerina* i. 149
„ *nyctea* i. 141
„ *Tengmalmi* i. 153
Noddy Tern iii. 531
Norfolk Plover ii. 436
Northern Diver iii. 425
„ Fulmar iii. 619
Nucifraga caryocatactes ii. 125
Numenius arquata ii. 577
„ *phœopus* ii. 583
„ *pigmœus* iii. 47
Nutcracker, the ii. 125
Nuthatch, the ii. 183
Nycticorax Europeus ii. 549
„ *Gardeni* ii. 549
Nyroca ferina iii. 332
„ *fuligula* iii. 351
„ *leucophthalmos* iii. 337
„ *marila* iii. 341
„ Pochard iii. 337

O.

VOL. PAGE
Œdicnemus Bellonii ii. 436
„ *crepitans* ii. 436
Oidemia fusca iii. 312
„ *nigra* iii. 317
„ *perspicillata* iii. 322
Oidicnemus Bellonii ii. 436
Olivaceous Gallinule iii. 10
Olive, a name for the Oyster-catcher.
Orange-legged Hobby i. 49
Organs of voice ii. 68
Oriole, the Golden i. 227
Oriolus galbula i. 227
Ortolan Bunting i. 502
Ortygometra crex iii. 92
Ortyx Virginiana ii. 391
Osprey, the i. 25
Otis œdicnemus ii. 436
„ *tarda* ii. 415
„ *tetrax* ii. 426
Otus brachyotos i. 128
„ *vulgaris* i. 124
Ouzel, the Ring i. 218
„ Water i. 181
Owl, the Barn i. 133
„ Canada i. 146
„ Eagle i. 114
„ Great-eared i. 114
„ Hawk i. 146
„ Little i. 149
„ Little-eared i. 120
„ Little-horned i. 120
„ Little Night i. 149
„ Long-eared i. 124
„ Long-horned i. 124
„ Scops-eared i. 120
„ Short-eared i. 128
„ Snowy i. 141
„ Tawny i. 138
„ Tengmalm's i. 153
„ White i. 133
„ Yellow i. 133
Oxbird iii. 81
Oyster-catcher ii. 496

P.

VOL. PAGE

Pandion haliæetus i. 25
Parasitic Gulls iii. 602
Parrot Crossbill ii. 24
Parrot, the Sea iii. 469
Partridge, Barbary ii. 387
„ the Common ii. 370
„ Red-legged ii. 381
„ Virginian ii. 391
Parus ater i. 369
„ *biarmicus* i. 381
„ *caudatus* i. 376
„ *cœruleus* i. 362
„ *cristatus* i. 366
„ *major* i. 358
„ *palustris* i. 372
Passenger Pigeon ii. 304
Passer domesticus i. 521
„ *montanus* i. 516
Passerine Warbler i. 312
Pastor, Rose-coloured ii. 48
„ *roseus* ii. 48
Pectinated claw iii. 487
Pectoral Sandpiper iii. 77
Peewit, the ii. 481
Pelecanus bassanas iii. 489
„ *carbo* iii. 480
„ *cristatus* iii. 486
„ *graculus* iii. 486
Perdix Borealis ii. 391
„ *cinerea* ii. 370
„ *coturnix* ii. 400
„ *gambra* ii. 387
„ *petrosa* ii. 387
„ *rufa* ii. 381
„ *Virginiana* ii. 391
Peregrine Falcon i. 37
Pernis apivorus i. 91
Petrel, Bulwer's iii. 636
„ Fork-tailed iii. 643
„ Fulmar iii. 619
„ Leach's iii. 643
„ the Storm iii. 647
„ Wilson's iii. 639
Petrocincla saxatilis i. 235

VOL. PAGE

Pettychaps, the Greater i. 312
„ the Lesser i. 335
Phalacrocorax carbo iii. 480
„ *cristatus* iii. 486
„ *graculus* iii. 486
Phalarope, Grey iii. 130
„ Red iii. 130
„ Red-necked iii. 135
Phalaropus fulicaria iii. 135
„ *fuscus* iii. 135
„ *hyberboreus* iii. 135
„ *lobatus* iii. 130
„ *platyrhinchus* iii. 130
Phasianus colchicus ii. 310
Pheasant, the ii. 310
Philomela luscinia i. 300
Phœnicura ruticilla i. 259
„ *Suecica* i. 254
„ *tithys* i. 264
Pica caudata ii. 109
Picus melanoleuca ii. 109
„ *major* ii. 148
„ *martius* ii. 132
„ *minor* ii. 154
„ *viridis* ii. 137
Pied Fly-catcher i. 177
„ Oyster-catcher ii. 496
„ Wagtail i. 395
„ Woodpecker ii. 148
Pigeon, Migratory ii. 304
„ Passenger ii. 304
„ Wood ii. 277
Pigeons held sacred, and why ii. 278
„ varieties of ii. 292
„ their flight home ii. 294
Pigmy Curlew iii. 47
Pine Bullfinch i. 581
„ Grosbeak i. 581
Pink-footed Goose iii. 153
Pintail Duck iii. 253
Pipit Lark i. 389, 422, and 427
„ Meadow i. 427
„ Richard's i. 436
„ Rock i. 432
„ Shore i. 432
„ Tree i. 422

VOL. PAGE
Platalea leucorodia . . ii. 564
Plectrophanes Lapponica i. 465
,, *nivalis* . . i. 470
Plover, Cream-coloured ii. 431
,, Golden . . . ii. 447
,, Great . . ii. 436
,, Green . . . ii. 447
,, Grey . . ii. 477
,, Kentish . . ii. 469
,, Little-ringed . ii. 473
,, Long-legged . . ii. 629
,, Norfolk . . ii. 436
,, Ringed . . ii. 465
,, Yellow . . ii. 447
Plumage, some laws of i. 166, 215
Pochard Duck . . iii. 332
Podiceps auritus . . iii. 417
,, *cornutus* . . iii. 411
,, *cristatus* . . iii. 400
,, *Hebridicus* . iii. 420
,, *minor* . . . iii. 420
,, *obscurus* . . iii. 411
,, *rubricollis* . . iii. 407
,, *urinator* . . iii. 400
Polish Swan . . . iii. 225
Polysticta Stelleri . . iii. 305
Pomerine Gull . . . iii. 606
,, Skua . . iii. 606
Port Egmont Hen . . iii. 602
Pratincole, Austrian . ii. 441
,, Collared . . ii. 441
Procellaria Anglorum . iii. 631
,, *Bullockii* . . iii. 643
,, *Bulweri* . iii. 636
,, *fuliginosus* . iii. 624
,, *glacialis* . iii. 619
,, *Leachii* . . iii. 643
,, *pelagica* . iii. 647
,, *puffinus* . . iii. 631
,, *Wilsoni* . iii. 639
Ptarmigan, the . . ii. 359
Puffin, the . . . iii. 469
Puffinus Anglorum . . iii. 631
,, *cinereus* . . iii. 624
,, *fuliginosus* . . iii. 624
,, *major* . . iii. 624

VOL. PAGE
Purple Heron . . . ii. 514
,, Martin . . ii. 257
,, Sandpiper . . iii. 88
Purre, the . . . iii. 81
Puttock, the Kite and Common Buzzard.
Pycnonotus chrysorhœus . i. 224
Pyrgita domestica . . i. 521
,, *montana* . . i. 516
Pyrrhocorax graculus . ii. 54
Pyrrhula enucleator . . i. 581
,, *vulgaris* . . i. 574

Q.

Quail, American . . ii. 391
,, Three-toed . . ii. 408
,, Common . . ii. 400
Queest, the . . . ii. 277
Querquedula acuta . . iii. 253
,, *circia* . iii. 277
,, *crecca* . . iii. 281
,, *glocitans* . iii. 260

R.

Rail, Water . . . iii. 110
Rainbird . . . ii. 137
Rain-goose . . . iii. 443
Rallus aquaticus . . iii. 110
,, *crex* . . . iii. 92
,, *porzana* . . iii. 97
Raptores . . . . i. 1
Rasores . . . ii. 277
Rattle-wings . . . iii. 368
Raven, the . . . ii. 61
Ray's Wagtail . . . i. 418
Razor-bill, the . . iii. 473
Recurvirostra avocetta . ii. 624
Red-backed Shrike . i. 161
Red-billed Heron . . ii. 526
Red-breasted Goosander iii. 389
,, ,, Goose . . iii. 170
,, ,, Merganser iii. 389

VOL. PAGE
Red-breasted Snipe . ii. 641, and iii. 43
Redbreast, the . . i. 247
Red-crested Pochard . iii. 327
„ „ Whistling Duck iii. 327
„ Duck . . . iii. 337
Red-footed Falcon . i. 49
Red Godwit . . . ii. 641
Red Grouse . . . ii. 351
Red-headed Pochard . iii. 332
Red-legged Crow . . ii. 54
„ „ Gull . . iii. 550
„ „ Partridge . ii. 381
„ necked Coot-foot . iii. 135
„ „ Grebe . iii. 407
„ „ Lobe-foot . iii. 135
„ „ Phalarope . iii. 135
Redpole, Common . i. 562
„ Lesser . . i. 562
„ Mealy . . i. 556
Red Sandpiper . . . iii. 52
Red shank, Common . ii. 591
„ „ Sandpiper . ii. 591
„ „ Spotted . ii. 587
Redstart, the Black . . i. 264
„ the . . i. 259
Red-throated Diver . . iii. 441
Redwing, the . . i. 207
Red-winged Blackbird . ii. 35
„ „ Maize-bird . ii. 35
„ „ Starling . ii. 35
Reed Warbler . . i. 295
„ Wren . . . i. 295
Reeve, the . . . ii. 645
Regulus auricapillus . . i. 346
„ *cristatus* . . i. 346
Regulus Dalmatian . . i. 355
Regulus hippolais . . i. 335
„ *ignicapillus* . . i. 351
„ *modestus* . . i. 355
„ *trochilus* . . i. 329
„ *vulgaris* . . i. 346
Rhynchaspis clypeata . iii. 242
Richardson's Lestris . iii. 611
„ Skua . . iii. 611
Richard's Pipit . . i. 436

VOL. PAGE
Ringdove . . . ii. 277
Ringed Dotterel . . ii. 465
„ Guillemot . . iii. 458
Ring-necked Diver . iii. 425
Ring Ouzel . . . i. 218
Ringed Plover . . ii. 465
Ringtail Harrier . . i. 101
„ head of . . i. 106
Robin, the . . . i. 247
Rock Dove . . . ii. 288
Rocker and Rockier . . ii. 288
Rock Pipit . . . i. 432
„ Sandpiper . . iii. 88
„ Thrush . . i. 235
Roller, the . . . ii. 211
Rook, the . . . ii. 91
Roseate Tern . . . iii. 501
Rose-coloured Ouzel . ii. 48
„ „ Pastor . ii. 48
„ „ Starling . ii. 48
Rotche, Common . . iii. 465
Rough-legged Buzzard . i. 87
Royston Crow . . . ii. 82
Ruddock, the Redbreast.
Ruddy Goose . . . iii. 230
Ruddy Plover . . ii. 491
„ Shieldrake . . iii. 230
Ruff, the . . . ii. 645
Rufous-backed Egret . ii. 526

S.

Sabine's Gull . . . iii. 537
„ Snipe . . iii. 39
„ Xeme . . . iii. 537
Saint Cuthbert's Duck . iii. 297
Salicaria arundinacea . i. 295
„ *locustella* . i. 285
„ *luscinoides* . . i. 293
„ *phragmitis* . i. 289
Sand Martin . . . ii. 251
Sanderling, the . . ii. 491
Sandpiper, Ash-coloured . iii. 52
„ Black . . iii. 88
„ Broad-billed . iii. 61
„ Buff-breasted iii. 57

VOL. PAGE
Sandpiper, Common . . ii. 607
„ Green . . ii. 595
„ Little . . iii. 66
„ Pectoral . iii. 77
„ Purple . . iii. 88
„ Red . . iii. 52
„ Rock . . iii. 88
„ Schinz's . iii. 74
„ Selninger's . iii. 88
„ Spotted . ii. 613
„ Wood . . ii. 601
Sandwich Tern . . iii. 497
Savi's Warbler . . i. 293
Saw-bill . . . iii. 389
Saxicola œnanthe . . i. 276
„ *rubetra* . . i. 272
„ *rubicola* . . i. 268
Scallop-toed Sandpiper, *see* Phalaropes.
Scansores . . . ii. 132
Scaup Duck . . . iii. 341
Schinz's Sandpiper . . iii. 74
Scilly Islands, rent of . iii. 470
Sclavonian Grebe . . iii. 411
Scolopax arquata . . ii. 577
„ *calidris* . . ii. 591
„ *canescens* . . ii. 618
„ *gallinago* . . iii. 25
„ *gallinula* . . iii. 33
„ *glottis* . . . ii. 618
„ *grisea* . . iii. 43
„ *Lapponica* . . ii. 634
„ *limosa* . . ii. 634
„ *major* . . . iii. 18
„ *novaboracensis* ii. 641
„ *œgocephala* . . ii. 641
„ *phœopus* . . ii. 583
„ *pygmæus* . . iii. 47
„ *rusticola* . . iii. 1
„ *Sabini* . . iii. 39
„ *totanus* . . ii. 587
Scooping Avocet . . ii. 624
Scops Aldrovandi . . i. 120
„ eared Owl . . i. 120
„ Owl . . . i. 120
Scoter, Common . . iii. 317
„ Surf . . . iii. 322

VOL. PAGE
Scoter, Velvet . . . iii. 312
Scraber, Common . . iii. 462
Sea Parrot and Puffin . iii. 469
„ Pheasant, the Pintail Duck . . . iii. 253
„ Pie, the . . ii. 496
„ Swallow . . . iii. 493
„ Titling . . . i. 432
Sedge Warbler . . i. 289
Selninger's Sandpiper . iii. 88
Serrated claw . . . iii. 487
Shag Cormorant, the . iii. 486
Shearwater, Cinereous . iii. 624
„ Petrel . iii. 631
„ the Dusky . iii. 624
„ the Greater iii. 624
„ the Manx . iii. 631
Shelldrake . . . iii. 235
Shieldrake, the . . iii. 235
„ Ruddy . iii. 230
Shore Lark . . . i. 440
„ Pipit . . . . i. 432
Short-eared Owl . . i. 128
„ horned Owl . . i. 128
„ toed Lark . . i. 463
Shoveler, the Blue-winged iii. 242
Shrike, Ash-coloured . i. 156
„ Cinereous . . i. 156
„ Great Grey . . i. 156
„ Red-backed . i. 161
„ Woodchat . . i. 167
Singing, how taught to birds, i. 577
Siskin, the . . . i. 544
Sitta Europœa . . ii. 183
Skua, Arctic . . . iii. 616
„ Buffon's . . iii. 616
„ Common . . iii. 602
„ Gull . . . iii. 602
„ Pomerine . . iii. 606
„ Richardson's . iii. 611
Sky-lark . . . . i. 447
Smew, the . . . iii. 378
Snake-bird . . . ii. 158
Snipe, Brown . . iii. 43
„ Common . . iii. 25
„ Double . . iii. 18

	VOL.	PAGE
Snipe, Great	iii.	18
„ Grey	iii.	43
„ Half	iii.	33
„ Jack	iii.	33
„ Sabine's	iii.	39
„ Solitary	iii.	18
„ Summer	ii.	607
„ Whole	iii.	25
Snow-bird, the	iii.	567
„ Bunting	i.	470
„ Flake	i.	470
Snowy Owl	i.	141
Soland Goose	iii.	489
Solent Goose	iii.	489
Solitary Snipe	iii.	18
Somateria dispar	iii.	305
„ *mollissima*	iii.	297
„ *spectabilis*	iii.	308
Song-thrush	i.	202
Sparrow, House	i.	521
„ Tree	i.	516
„ Hawk	i.	67
Spathula clypeata	iii.	242
Speckled Diver	iii.	441
Spoonbill, the	ii.	564
Spotted Crake	iii.	97
„ Eagle	i.	10*
„ Flycatcher	i.	172
„ Gallinule	iii.	97
„ Guillemot	iii.	462
„ Redshank	ii.	587
„ Sandpiper	ii.	613
„ Snipe	ii.	587
„ Water-hen	iii.	97
Spur-winged Goose	iii.	177
Squacco Heron	ii.	530
Squatorala cinerea	ii.	477
„ *Helvetica*	ii.	477
Standgale, the	i.	57
Starling, Common	ii.	40
„ Red-winged	ii.	35
Steller's Western Duck	iii.	305
Sterna Anglica	iii.	515
„ *Arctica*	iii.	507
„ *Boysii*	iii.	497
„ *Cantiaca*	iii.	497

	VOL.	PAGE
Sterna Caspia	iii.	493
„ *Delamotte*	iii.	512
„ *Dougallii*	iii.	501
„ *fissipes*	iii.	523
„ *hirundo*	iii.	504
„ *leucopareia*	iii.	512
„ *leucoptera*	iii.	527
„ *minuta*	iii.	519
„ *nævia*	iii.	523
„ *nigra*	iii.	523
„ *stolida*	iii.	531
Stilt, Black-winged	ii.	629
Stint, Little	iii.	66
„ Temminck's	iii.	70
Stock Dove	ii.	283
Stonechat, the	i.	268
Stone Curlew	ii.	436
Stork, Black	ii.	558
„ White	ii.	554
Storm Cock	i.	187
„ Petrel	iii.	647
Strepselas interpres	ii.	486
Striated Tern	iii.	497
Strix brachyotos	i.	128
„ *bubo*	i.	114
„ *flammea*	i.	133
„ *funerea*	i.	146
„ *nyctea*	i.	141
„ *otus*	i.	124
„ *passerina*	i.	149
„ *scops*	i.	120
„ *stridula*	i.	138
„ *Tengmalmi*	i.	153
Sturnus cinclus	i.	181
„ *predatorius*	ii.	35
„ *vulgaris*	ii.	40
Sula alba	iii.	489
Summer Snipe	ii.	607
„ Teal	iii.	277
Surf Scoter Duck	iii.	322
Surnia funerea	i.	146
„ *nyctea*	i.	141
Swallow, the	ii.	231
„ tailed Kite	i.	77
Swan, Bewick's	iii.	194
„ Domestic	iii.	205

VOL. PAGE
Swan, the Mute . . iii. 205
„ the Polish . . . iii. 225
„ the Whistling . iii. 187
„ the Wild . . iii. 187
Swan Marks iii. 216, 219, and 224
Swift, Alpine . . . ii. 266
„ the Common . ii. 260
„ White-bellied . ii. 266
Swiftfoot, Cream-coloured ii. 431
Sylvia arundinacea . . i. 295
„ *atricapilla* . . i. 307
„ *cinerea* . . . i. 316
„ *Dartfordiensis* . i. 340
„ *hippolais* . . i. 335
„ *hortensis* . . i. 312
„ *ignicapilla* . . i. 351
„ *locustella* . . i. 285
„ *luscinia* . . . i. 300
„ *luscinoides* . . i. 293
„ *modularis* . . i. 243
„ *œnanthe* . . i. 276
„ *phœnicurus* . . i. 259
„ *provincialis* . . i. 340
„ *regulus* . . . i. 346
„ *rubecula* . . i. 247
„ *rubetra* . . . i. 272
„ *rubicola* . . i. 268
„ *salicaria* . . i. 289
„ *Suecica* . . i. 254
„ *sylvicola* . . i. 324
„ *sylviella* . . i. 320
„ *tithys* . . . i. 264
„ *trochilus* . . i. 329
„ *troglodytes* . . ii. 169
Syrnium aluco . . i. 138
„ *Tengmalmi* . . i. 153
„ *stridula* . . i. 138

T.

Tadorna Bellonii . . iii. 235
„ *rutila* . . iii. 230
„ *vulpanser* . . iii. 235
Tantalus falcinellus . iii. 571
„ *igneus* . . ii. 571
Tarrock Gull . . . iii. 562

VOL. PAGE
Tawny Bunting . . i. 470
„ Owl . . . i. 138
Teal, the Common . iii. 281
„ „ Summer . . iii. 277
Temminck's Sandpiper . iii. 70
„ Stint . . iii. 70
„ Tringa . iii. 70
Tengmalm's Owl . . i. 153
Tern, the Arctic . . iii. 507
„ „ Black . . . iii. 523
„ „ Caspian . . iii. 493
„ „ Common . . iii. 504
„ Gull-billed . . iii. 515
„ the Lesser . . iii. 519
„ „ Moustache . iii. 512
„ „ Noddy . . iii. 531
„ „ Roseate . iii. 501
„ „ Sandwich . iii. 497
„ „ Whiskered . iii. 512
„ White-winged Black iii. 527
Tetrao coturnix . . ii. 400
„ *lagopus* . . ii. 359
„ *Scoticus* . . . ii. 351
„ *tetrix* . . . ii. 340
„ *urogallus* . . ii. 323
Thalassidroma Bullockii iii. 643
„ *Bulweri* . iii. 636
„ *Leachii* . iii. 643
„ *pelagica* . iii. 647
„ *Wilsoni* . iii. 639
Thick-billed Guillemot . iii. 455
Three-toed Quail . . ii. 408
Thick-kneed Bustard . ii. 436
Thrush, Gold-vented . i. 224
„ Holm . . . i. 187
„ Missel . . i. 187
„ the Ring . . i. 218
„ „ Rock . . i. 235
„ „ Song . . i. 202
„ „ White's . i. 192
Tinkershere, the . . iii. 450
Tit, Bearded . . . i. 381
„ Blue . . . . i. 362
„ Cole . . . i. 369
„ Crested . . . i. 366
„ Great . . . i. 358

VOL. PAGE
Tit, Long-tailed . . . i. 376
,, Marsh . . . i. 372
Titlark, the . . . i. 427
Totanus calidris . . ii. 591
,, *fuscus* . . . ii. 587
,, *glareola* . . ii. 601
,, *glottis* . . . ii. 618
,, *hypoleucos* . ii. 607
,, *macularius* . . ii. 613
,, *ochropus* . . ii. 595
Tree Pipit . . . i. 422
,, Sparrow . . i. 516
Tringa alpina . . . iii. 81
,, Buff-breasted . iii. 57
,, *Canutus* . . iii. 52
,, *cinclus* . . iii. 81
,, *cinerea* . . . iii. 52
,, *glareola* . . ii. 601
,, *hypoleucos* . . ii. 607
,, *interpres* . . ii. 486
,, *Icelandica* . . iii. 52
,, *Lincolniensis* . iii. 88
,, *lobata* . . . iii. 130
,, *macularia* . . ii. 613
,, *maritima* . . iii. 88
,, *minuta* . . iii. 66
,, *nigricans* . . iii. 88
,, *ochropus* . . ii. 595
,, *pectoralis* . . iii. 77
,, *platyrhyncha* . iii. 61
,, *pugnax* . . . ii. 645
,, *pusilla* . . iii. 66
,, *rufescens* . . iii. 57
,, *Schinzii* . . iii. 74
,, *squatorala* . . ii. 477
,, *striata* . . iii. 88
,, *subarquata* . . iii. 47
,, *Temminckii* . iii. 70
,, *vanellus* . . ii. 481
,, *variabilis* . . iii. 81
Trochilus minor . . i. 335
Troglodytes vulgaris . ii. 169
Tufted Duck . . . iii. 351
,, Pochard . . iii. 351
Turdus aureus . . . i. 192
,, *aurigaster* . . i. 224
Turdus cinclus . . . i. 181
,, *chrysorheus* . i. 224
,, *iliacus* . . . i. 207
,, *merula* : . i. 211
,, *musicus* . . i. 202
,, *pilaris* . . i. 198
,, *roseus* . . . ii. 48
,, *saxatilis* . . i. 235
,, *torquatus* . . i. 218
,, *varius* . . i. 192
,, *viscivorus* . . i. 187
,, *Whitei* . . i. 192
Turnstone, the . . ii. 486
Turtle Dove, the . . ii. 299
Twite, the . . . i. 569
Tyste, the . . . iii. 462

U.

Ulula stridula . . . i. 138
Upupa epops . . ii. 175
Uria alle . . . . iii. 465
,, *Brunnichii* . . iii. 455
,, *grylle* . . . iii. 462
,, *lacrymans* . . iii. 458
,, *minor* . . . iii. 450
,, *troile* . . . iii. 450
Urogallus vulgaris . . ii. 323

V.

Vanellus cristatus . . ii. 481
,, *griseus* . . ii. 477
,, *melanogaster* . ii. 477
Varieties in birds . . ii. 101
Velvet Duck . . . iii. 312
,, Scoter . . iii. 312
Virginian Colin . . ii. 391
,, Partridge . ii. 391
Vision, power of . i. 15, 145
Voice, Organs of . . ii. 67
Vultur fulvus . . . i. 1
Vulture, Egyptian . . i. 6
Vulture, Griffon . . i. 1
Vultur percnopterus . i. 6

W.

VOL. PAGE
Wagel Gull . . . iii. 591
Wagtail, Blue-headed . i. 412
„ Grey . . i. 407
„ Grey-headed . i. 412
„ Pied . . . i. 395
„ Ray's . . i. 418
„ White . . i. 403
„ Yellow . . i. 418
Warbler, Blue-throated . i. 254
„ Grasshopper . i. 285
„ of Savi . . i. 293
„ Reed . . i. 295
„ Sedge . . i. 289
Water Rail . . . iii. 110
Water Ouzel . . . i. 181
Waxen Chatterer . . i. 388
Waxwing, the . . . i. 388
Western Duck . . iii. 305
„ Pochard . . iii. 305
Whaup . . . ii. 579
Wheatear, the . . . i. 276
Weather guides . . ii. 142
Whet-ile, and why . . ii. 137
Whewer, the Wigeon . iii. 286
Whimbrell, the . . ii. 583
Whinchat, the . . i. 272
Whiskered Tern . . iii. 512
Whistling Swan . . iii. 187
White-bellied Swift . . ii. 266
White-eyed Duck . iii. 337
White-fronted Goose . iii. 157
White Heron . . ii. 518
White-headed Goosander iii. 378
White Grouse . . . ii. 359
White Nun . . . iii. 378
White Owl . . . i. 133
„ Spoonbill . . ii. 564
„ Stork . . . ii. 554
„ tailed Eagle . i. 20
„ tail, the Wheatear.
„ throat, the . . i. 316
„ throat, the Lesser . i. 320
White's Thrush . . i. 192
White-winged Black Tern iii. 527
„ winged Crossbill ii. 28

VOL. PAGE
White Wagtail . . i. 403
Wigeon, American . iii. 292
„ the Common . iii. 286
Wild Duck . . . iii. 264
„ Goose . . . iii. 140
„ Swan . . . iii. 187
Willock, the . . . iii. 450
Willow Locustelle . i. 293
„ Warbler . . i. 329
„ Wren . . i. 329
Wilson's Petrel . . iii. 639
Windhover, the . . i. 57
Wing-primary feathers . i. 106
Winter Gull . . iii. 570
Winter Mew . . . iii. 570
Witwall . . . ii. 137
Woodchat Shrike . . i. 167
Woodcock, Sir F. Chantrey's iii. 17
„ the . . iii. 1
Woodcocks breeding . iii. 8
Wood Grouse . . . ii. 323
Woodlark . . . i. 459
Woodpecker, Barred . ii. 154
„ Great Black ii. 132
„ Great Spotted ii. 148
„ Green . ii. 137
„ Least Spotted ii. 154
„ Lesser Spotted ii. 154
„ Pied . . i. 148
Woodpie, the . . ii. 148
Woodpigeon . . . ii. 277
Wood Sandpiper . . ii. 601
Woodspite . . . ii. 137
Woodwall, what bird . ii. 137
Wood Warbler . . i. 324
Wood Wren . . i. 324
Wren, the . . . ii. 169
Writing Lark . . i. 490
Wryneck, the . . . ii. 158

X.

Xema atricilla . . . iii. 557
„ *minutus* . . iii. 543
„ *ridibundus* . . iii. 550
„ *Sabini* . . iii. 537
„ Sabine's . . iii. 537

Y.

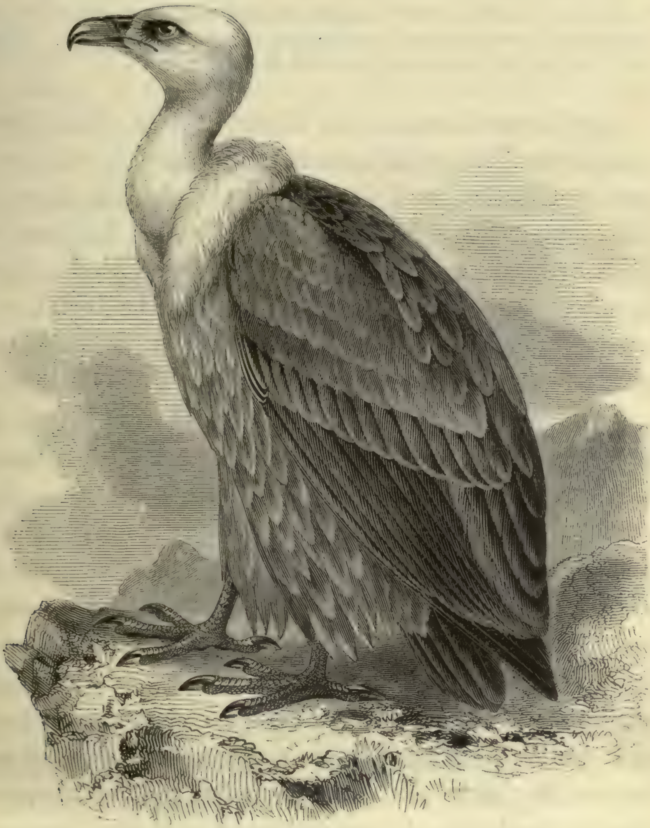
	VOL.	PAGE
Yaffle, the	ii.	137
Yellow Ammer	i.	490
„ Bunting	i.	490
„ Legged Gull	iii.	583
„ Owl	i.	133
„ Plover	ii.	447
„ Wagtail	i.	418
Yellow Warbler	i.	329
Yunx torquilla	ii.	158

Z.

	VOL.	PAGE
Zapornia Baillonii	iii.	106
„ *porzana*	iii.	97
„ *pusilla*	iii.	101

BRITISH BIRDS.

RAPTORES. *VULTURIDÆ.*



THE GRIFFON VULTURE.

Vultur fulvus.

Vultur fulvus,	*Griffon Vulture,*	Gould, Birds of Europe, pt. ii.
" "	*Vautour Griffon,*	Temminck, Manuel d'Ornithologie, vol. i. p. 5. vol. iii. p. 3.

11

Vultur fulvus, *Fulvous Vulture*, HARVEY, Fauna of Cork, p. 4.
" " *Griffon Vulture*, THOMPSON, Annals of Nat. Hist. vol. xv, art. 31.

VULTUR. *Generic Characters.* — Beak strong, thick and deep, base covered with a cere ; upper mandible straight until it reaches the point, where it is hooked abruptly ; under mandible straight, rounded, and becoming narrower towards the point. Head naked or covered with short down. Nostrils naked and pierced diagonally in the cere. Feet very strong, furnished with claws slightly hooked ; the middle toe very long, and united at the base to the external toe. Wings long ; the first quill-feather short, the fourth the longest.

THE BRITISH BIRDS in this History will be divided into five principal orders, in accordance with the views of modern systematic Ornithologists, more particularly those of this country. The first of these orders, the RAPTORES, or Birds of Prey, as they are usually called, includes three families,—the Vultures, the Falcons, and the Owls ; and although the Vultures are commonly confined to the more tropical countries of the Old and of the New World, the capture of two examples of different species, one in Ireland, and the other in England, entitle them to a notice in this work.

Vultures are most numerous in warm countries, where a high degree of temperature induces rapid decomposition. Their food is chiefly animal substance in a decaying state, and their business in nature, as observed by Mr. Vigors, is to clear away with rapidity those putrifying remains which, if allowed to accumulate, might produce pestilence and death. The same services rendered to man by numerous Storks in the cities of India, and by troops of dogs in Constantinople, are performed on a much more extended scale by Vultures. So valuable are these services, that Vultures are almost universally protected from molestation or injury either by local legislation or by common consent. Great powers of smell have been attributed to them ; and it appears certain that they possess also extraordinary extent of vision. Their flight is rather marked by a sustaining strength than great rapidity; the latter quality being more particularly required by those birds which pursue and prey on living animals. The more straightened claws of the Vultures, unlike those of the Falcons, do not enable them generally to grasp and bear away the carrion to their young; but, more or less restrained in these powers according to the species, most of them devour their meal on the spot where they find it, and conveying it away in their craw, disgorge it when they arrive at their nest.

It will be one of the objects of this History to trace our British Birds, throughout all the various countries in which they are found, and thus to show, as far as has been yet observed, the extent of the range of each species.

I am indebted to the kindness of Admiral Bowles for the first notice of the capture in Ireland of the Griffon Vulture, of which the engraved figure at the commencement of this article is a representation. In the autumn of 1843, while Admiral Bowles was in command on the Cork station, on his visiting Lord Shannon, at Castle Martyr, near the Cove of Cork, he saw there this Vulture which had been caught by a youth on the rocks near Cork Harbour, in the spring of that year. The bird had been brought to Castle Martyr for sale, and was purchased by Lord Shannon's keeper for half-a-crown. The bird was full grown; the plumage perfect, without any of the appearances consequent upon confinement; there was no reason to suspect that the bird had escaped from any ship; it was very wild and savage, and was in perfect health. Not long afterwards Mr. Thompson observes in the Annals of Natural History already quoted, "his Lordship politely offered the bird to Mr. Ball for the collection in the Garden of the Zoological Society, Dublin; but before arrangements were completed for its transmission it died. The specimen was, by the directions of Lord Shannon, carefully preserved and stuffed, and placed at the disposal of Mr. Ball, who has added it to the collection in Trinity College, Dublin. It is in adult plumage."

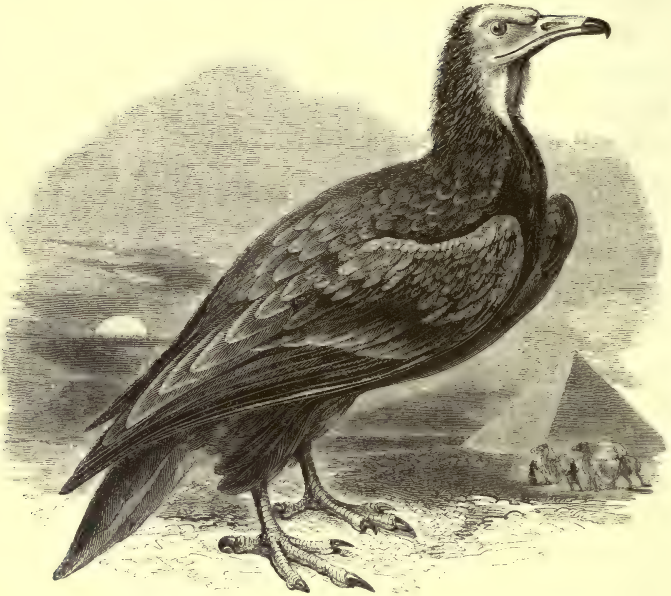
This species of Vulture, of large size and proportionate strength, possesses also great sustaining powers of flight, and has, as might be expected, a very extended geographical range. It is found in Germany, France, on the Pyrenees, and in Spain, particularly the rocky country about Arragon, and is common both there and at Gibraltar. It is included by Polydore Roux in his Birds of Provence, and is found in Sardinia, Italy, Silesia, Dalmatia, Albania, the Grecian Archipelago and Candia. The Zoological Society of London possess specimens sent from Tangiers and Tunis, and it is known to inhabit Algeria, Egypt, and other parts of the African Continent.

It is one of the characters of the Vultures generally, that unless pressed by extreme hunger, they seldom attack living animals, but appear to prefer carrion and putrifying substances; and when fed to repletion are so sluggish and inactive as to be easily captured. The late Drummond Hay, Esq., the representative of the British Government at Tangiers, in a communication to the Zoological Society of London on the Birds of North Africa, says of this Vulture, "I shot this bird as he rose heavily from the top of a high rock, near Cape Spartel on the north coast, where he had been gorging himself with the body of a dead kid. The species is rare in these parts." They build on high and almost inaccessible rocks, but are observed to descend to and frequent open plains in winter. In Sardinia, and in some other countries, this Vulture makes a large nest, of three or four feet in diameter, on high trees, and lays two or sometimes three elongated white eggs, nearly as large as those of the Goose.

The following description is taken from a fine living specimen in the Garden of the Zoological Society in the Regent's Park. The beak from the curved point to the cere is of a yellowish white horn colour; the cere itself bluish black; the irides reddish orange; the head, neck, and circular ruff of dull whitish down; the lanceolate feathers below the circular ruff, the plumage of the upper surface of the body and the wing-coverts, light yellowish brown; the shaft of each feather of light wood brown; the primaries and tail-feathers dark clove brown; the lower part of the neck in front, and the upper part of the breast dull white, mixed with light brown; under surface of the body reddish yellow brown; the smaller under wing-coverts light brown; the large under wing-coverts almost white; the legs and toes lead colour; the claws black; the anterior portion of each toe covered with six large scales, the remaining portion and the legs reticulated.

A specimen in the Museum of the Zoological Society, sent by Sir Thomas Reade from Tunis, measures in its whole length from the point of the beak to the end of the tail-feathers three feet eight inches; from the anterior bend of the wing to the end of the longest quill-feather twenty-seven inches; the length of the middle toe and claw five inches.

RAPTORES. *VULTURIDÆ.*



EGYPTIAN VULTURE.

Neophron percnopterus.

Vultur percnopterus,	*Alpine Vulture,*	BEWICK, Brit. Birds, edit. 1832, vol. i. p. 51.
Neophron ,,	*Egyptian Neophron,*	SELBY, Illustrations of British Ornithology, vol. i. p. 4.
,, ,,	,, ,,	JENYNS, Man. Brit. Vert. An. p. 79.
,, ,,	,, *Vulture,*	EYTON, History of Rare British Birds, p. 1.
,, ,,	,, *Neophron,*	GOULD, Birds of Europe, pt. ii.
Cathartes ,,	*Catharte alimoche,*	TEMMINCK, Manuel d'Ornithologie, vol. i. p. 8

NEOPHRON. *Generic Characters.*—Beak straight, slender, elongated, rounded above, encircled at the base with a naked cere, which extends more than half the length of the beak: upper mandible with straight edges, hooked at the tip; under mandible blunt, and shorter than the upper. Nostrils near the middle of the beak, elongated, longitudinal. Head and neck partly bare of feathers. Wings long, rather pointed; the third quill-feather the longest. Legs of moderate strength and length; tarsi reticulated; feet with four toes, three before, one behind; anterior toes united at the base. Tail-feathers fourteen.

Two examples of this Vulture were seen on the shores of the Bristol Channel, and one of them, now in the possession of the Rev. A. Mathew, of Kilve in Somersetshire, was shot near that place in October 1825. "When first discovered it was feeding upon the carcass of a dead sheep, and had so gorged itself with the carrion as to be unable or unwilling to fly to any great distance at a time, and was therefore approached without much difficulty and shot. Another bird, similar to it in appearance, was seen at the same time upon wing at no great distance, which remained in the neighbourhood a few days, but could never be approached within range, and which was supposed to be the mate of the one killed."

The Egyptian Vulture is included by Le Vaillant in his Birds of Southern Africa. He found it occasionally at the Cape, and still more numerous in the interior: it has also been obtained by naturalists in the same localities up to the present time. It is there called by various names which signify White Crow, the name referring to the adult bird. Le Vaillant states that this species inhabits the whole of Southern Africa, and is infinitely more common within the tropics than elsewhere. The Egyptian Vulture does not live in flocks, like other Vultures; although, when attracted by a carcass, eight or ten may be seen assembled. At other times it is rare to see more than two together. The male and female seldom separate. In the districts which this species inhabits, every group of the natives has a pair of these Vultures attached to it. The birds roost on the trees in the vicinity, or on the fences which bound the enclosures formed for their cattle. They are to a certain degree domiciled and harmless. The people do them no injury: on the contrary, they are rather glad to see and encourage them, because they clear the premises of all the offal and filth they can find. In default of other food, they eat frogs, lizards, and snakes. They make their nests among rocks, and the Hottentots assured M. Le Vaillant that they laid three and sometimes four eggs; but this he had no opportunity of verifying. The eggs are white; and in Mr. Hewitson's work on British Bird's eggs, the representation measures two inches and one quarter in length, by one inch and three-quarters in breadth.

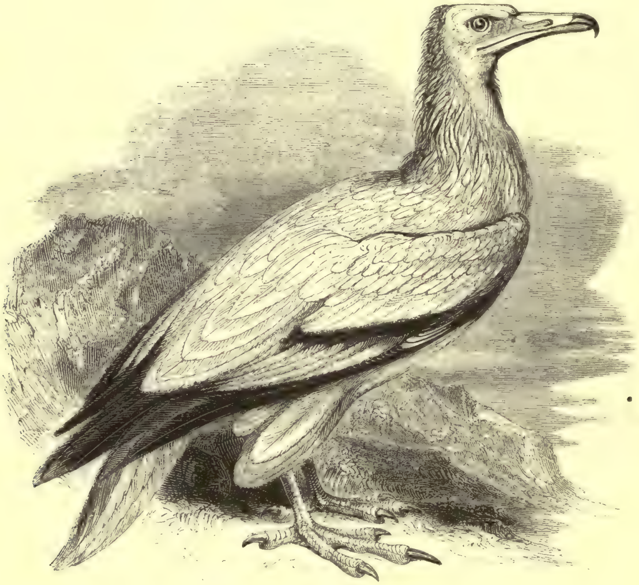
From the vicinity of Tangiers in North Africa, this species passes over to Portugal; it is common in Spain, building on high rocks about Arragon. In France it inhabits the Alps and Pyrenees, it is found also in Provence. Buffon has recorded its appearance, and received an adult specimen from Norway; it is not therefore at all surprising that this bird should have been taken in England. The specimen of this Vulture obtained from Norway was placed by Buffon in the National Cabinet. Le Vaillant compared his Cape specimens with this example received from Norway, and was convinced they were the same species.

Malta, Sicily, Corfu, and Crete, with other islands of the Mediterranean Sea, are, as might be expected, visited by this Vulture. Bruce, in the appendix to his Travels, says it is frequent in Egypt and about Cairo, where it is called by the Europeans Pharaoh's Hen. In Egypt and Barbary it is also called Rachamah. This name, referring to the black and white colours of the adult birds, is said to be derived from *Rahama*, a name applied to a particular breed of sheep in Arabia Felix, which are black and white. Bruce, however, thinks this name has a different origin, and derived from higher antiquity, since Rachma, or the Vulture, was sacred to Isis, and considered as an emblem of parental affection ; he therefore thinks it may be derived from the Hebrew, *Rechem*, which signifies female love or attachment. Bruce adds, that this bird builds its nest in the most deserted parts of the country, and lays but two eggs. The parent birds attend their young with great care, and feed them for the first four months. It is considered a breach of order to kill any one of these birds in Cairo.

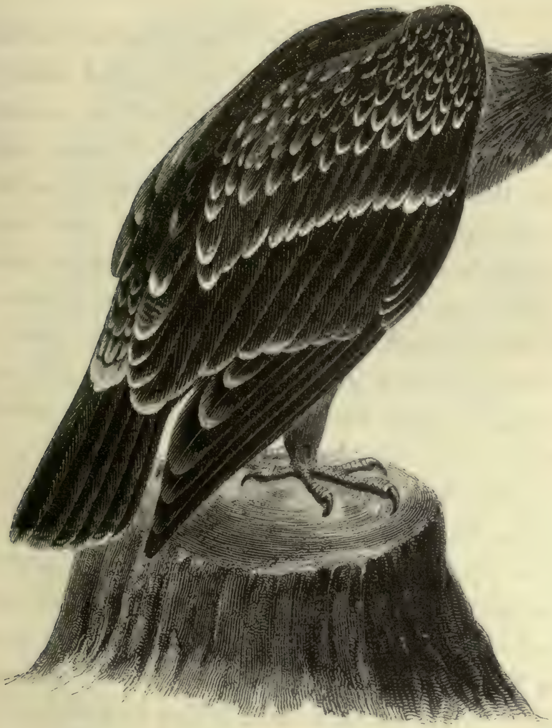
From Turkey this species ranges over Arabia and Persia, and has been found in the Russian dominions as far north as Astrachan, from whence it again extends eastward and southward, and has been taken in various parts of India. Colonel Sykes remarks of them, "that they are always found in cantonments and camps. For the most part of the day they continue on the wing, soaring in circles. When on the ground, they walk with a peculiar gait, lifting their legs very high. They are efficient scavengers."

In the adult bird, the whole length from the point of the beak to the end of the tail is from twenty-six to twenty-nine inches ; and specimens from Africa are observed to be the largest in size. The cere and beak are yellow, the point brown ; the irides red : the naked skin of the cheeks and front of the neck yellowish flesh colour ; the feathers of the occiput and back of the neck slightly elongated : all the plumage white except the primary and secondary wing-feathers, the first of which are wholly black ; the second have the proximal half black,—which colour, extending beyond the ends of the great wing-coverts, forms by its exposure a dark band across the middle of the wing; the remaining portion of the secondaries white: the tail is graduated, the feathers of the middle being the longest; the legs and toes yellow; the claws black. In this state it is the Norwegian Vulture and White Vulture of Buffon; the Ash-coloured and Alpine Vulture of Dr. Latham.

The young bird has the base of the bill yellow, the point black; irides reddish brown: the naked skin of the cheeks and front of the neck livid grey; the general colour of the plumage dark brown, with a few light-coloured feathers, and the edges of others indicating the approach to maturity; great quill-feathers black; legs and toes greyish brown; claws black. In this state it is the Maltese Vulture of Buffon and Latham.



RAPTORES. *FALCONIDÆ.*



THE SPOTTED EAGLE.

Aquila nævia.

	Rough-footed Eagle,	LATH. Syn. v. i. p. 37.
	Spotted Eagle,	„ „ „ 38.
Aquila nævia,	„ „	GOULD, Birds of Europe, pt. xiv.
Falco nævius,	*Aigle criard,*	TEMM. Man. d'Ornith. vol. i. p. 42.
„ „	„ „	„ „ „ vol. iii. p. 23.

FOR the particulars of the occurrence of this interesting addition to the ornithology of the British Islands, I am indebted to the kindness of Mr. Robert Davis, Jun., of Clonmel, who sent me also a coloured drawing made from the bird, and from which the representation here given was copied.

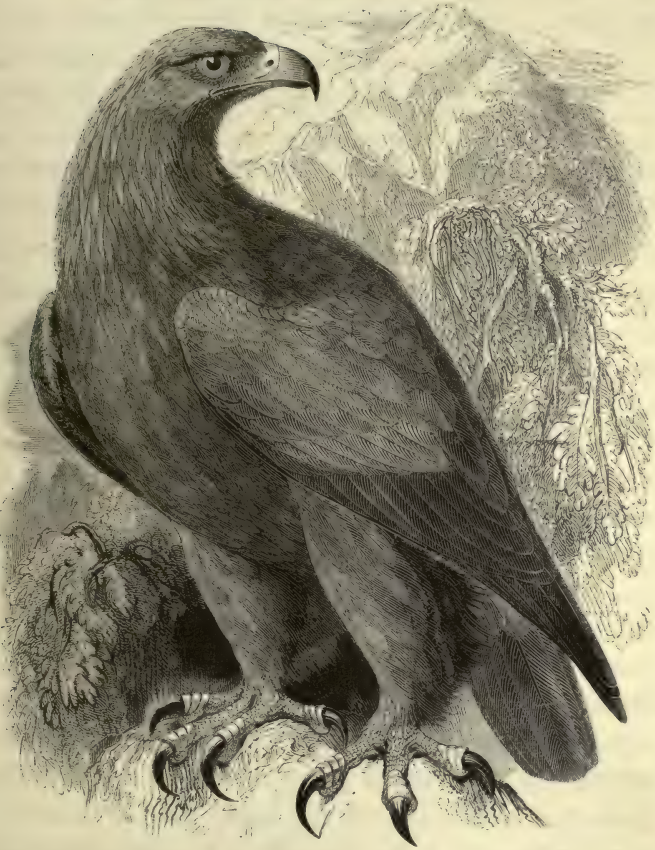
"This specimen," observes Mr. Davis, "which is the property of my friend Samuel Moss of Youghal, county of Cork, was shot in the month of January of the present year, 1845, on the estate of the Earl of Shannon, and was at the time in a fallow field, devouring a rabbit. Another bird similarly marked, but reported to have been of a lighter shade of brown, was shot at the same place within a few days, but was unfortunately not preserved. Both had been noticed during the two previous months sweeping over the low grounds in the neighbourhood, which is near Youghal, and between Castle Martyr and Clay Castle.

This Eagle, very similar in appearance to our well-known Golden Eagle, but almost one-third smaller in size, inhabits the Apennines and other mountains of central Europe, occasionally diverging as far north as Russia and Siberia, and as far south as Egypt; its range to the eastward from Europe extending as far in India as Nepal and Calcutta. It builds on high trees, laying two eggs of a light colour, slightly marked with red. The food is small quadrupeds and birds.

From the late period, in reference to the printing of these volumes, at which the occurrence of this species became known to me, I can only here introduce it on a single leaf, and refer to figures for its appearance at different ages.

The illustration here given represents the bird in its first year; Mr. Gould's figure is from a bird in its second year; the figure in Werner's Illustrations of M. Temminck's Manual is from an adult bird.

RAPTORES. *FALCONIDÆ.*



THE GOLDEN EAGLE.

Aquila chrysaëtos.

Falco chrysaëtos,	*Golden Eagle,*	Pennant, Brit. Zool. edit. 1812, vol. i. p. 197.
" "	" "	Montagu, Ornith. Dict.
" "	" "	Bewick, Brit. Birds, vol. i. p. 5.

Aquila chrysaëtos,	*Eagle,*	Flem. Brit. An. p. 52.
„ „	*Golden Eagle,*	Selby, Brit. Ornith. vol. i. p. 12.
„ „	„ „	Jenyns, Man. Brit. Vert. p. 80.
„ „	„ „	Gould, Birds of Europe, pt. vi.
Falco fulvus,	*Aigle Royal,*	Temm. Man. d'Ornith. vol. i. p. 38.

Aquila. *Generic Characters.*—Beak strong, of moderate length, curved from the cere, pointed, the cutting edges nearly straight. Nostrils oval, lateral, directed obliquely downward and backward. Wings large and long, the fourth quill-feather the longest. Legs strong; tarsi feathered to the junction of the toes. Feet strong; the last phalanx of each toe covered by three large scales; claws strong, hooked.

In the second edition of his Manual of the Birds of Europe, published in 1820, M. Temminck, who is deservedly considered one of the best authorities in Ornithology, formed six divisions of the extensive genus *Falco* of Linnæus, under names that are equivalent to the Eagles, Falcons, Hawks, Kites, Buzzards, and Harriers of English authors. It will be seen that these divisions and their distinctions as enumerated by M. Temminck are only other terms for the genera and generic characters of other naturalists. In accordance with some of the views of modern systematic writers in Ornithology, many of the new divisions or genera will be included in the present work. The characters upon which these divisions are founded by their respective authors will be given; and by comparing these with the characters of the genus from which the particular species has been separated, the reader will be enabled to judge for himself of the propriety and value of the new distinctions.

Of the Diurnal Birds of Prey, constituting the family of *Falconidæ*, the second in the order *Raptores*, the Eagles are by far the largest in size, and of great muscular power; and although they do not possess all the characteristics which distinguish the true Falcons, their flight is powerful, and their habits destructive.

The Golden Eagle, though occasionally seen and sometimes obtained in the southern counties of England, is more commonly found in Scotland, and its western and northern islands. Mr. Mudie, in his Feathered Tribes of the British Islands, has named "the higher glens of the rivers that rise on the south-east of the Grampians—the high cliff called Wallace's Craig on the northern side of Lochlee, and Craig Muskeldie on its south side," as localities for the Golden Eagle. Mr. Selby and his party of naturalists observed this species in Sutherlandshire in the summer of 1834. Mr. Macgillivray, in his detailed descriptions of the Rapacious Birds of Great Britain, has recorded his own observations of this species in the Hebrides; and other observers have seen it in the Orkney and Shetland Islands, where it is said constantly to rear its young.

Some years ago a specimen was killed at Bexhill in Sussex; it has also occurred, but very rarely, in Suffolk, Norfolk, Derbyshire, Durham, and Northumberland.

In a direction, south and west of London, the Golden Eagle has been obtained or seen in the Isle of Wight, and on the coasts of Devonshire and Cornwall. In Ireland, a Ring-tailed Eagle, the young of the Golden, was seen by a party of naturalists in Connamara in the autumn of 1835; and from William Thompson, Esq. President of the Natural History Society of Belfast, to whom I am indebted for a catalogue and notes of the Birds of Ireland, which will be constantly referred to throughout this work, I learn that specimens of the Golden Eagle are preserved in Belfast which were obtained in the counties of Donegal and Antrim.

Wilson, in his American Ornithology, states that the Golden Eagle is found in America, from the temperate to the arctic regions, particularly in the latter, breeding on high precipitous rocks, always preferring a mountainous country. Dr. Richardson considers that this bird is seldom seen in North America far to the eastward of the Rocky Mountains. Mr. Audubon saw one on the coast of Labrador, besides others in various parts of the United States of America.

The Golden Eagle inhabits Iceland, Scandinavia, Russia, and Germany. In France, according to M. Temminck, it is not uncommon in the forests of Fontainebleau, and it breeds in the Alps and Pyrenees. A range still farther to the southward and eastward is now ascertained. The representative of the British Government at Tangiers, included this species in a catalogue of the birds of that country sent to the Zoological Society. It is found in Sicily, in Asia Minor, and several parts of India.

The flight of the Golden Eagle is described by those who have witnessed it as majestic and powerful in the extreme; and from the great strength of the bird, it preys with ease on fawns, lambs, hares, and other game, very seldom feeding on fish or carrion, and rarely on anything which it finds dead. Montagu relates, that "when sporting in the neighbourhood of Ben-Lomond, on the summit of the lesser mountains that form its base, a Red Grouse was wounded, and flew with difficulty eighty or a hundred paces. An Eagle, apparently of this species, perceiving the laborious flight of the Grouse, descended with rapid wing from the adjacent lofty cliffs before our guns were reloaded, and, in defiance of the shouts made to deter him, carried off his prey." In another part of the Western Highlands of Scotland, Montagu "had an opportunity of witnessing the powers of the flight of this bird in pursuit of its quarry. An old Black Cock was sprung, and was instantly pursued by the Eagle (which must have been on a neighbouring rock unperceived) across the glen, the breadth of which was at least two miles. The Eagle made several pounces in view, without success; but as there was no wood nor cover on the opposite mountain sufficient to conceal so large a bird as a Black Grouse, he doubtless forfeited his life to the merciless tyrant of the rocks."

Dr. Fleming, who had opportunities of observing these birds when residing in Zetland, says that they are general depredators, and in the breeding-season rob the rock birds of their young, especially the Gulls and Cormorants. This habit is probably common to both species of British Eagles.

The power of vision in birds is observed to be very extraordinary; and in none is it more conspicuous than in the Eagles, and the *Falconidæ* generally. It has been stated that probably in the whole range of anatomical structure, no more perfect or more conclusive proofs of design could be adduced than are to be found in the numerous and beautiful modifications in the form of various parts of the eyes of different animals, destined to exercise vision in media of various degrees of transparency as well as density. The figure on the right hand of the vignette at the end of this article represents the circle, composed of fifteen bony plates, by which the orb of the eye of the Golden Eagle is supported. These bony plates are capable of slight motion upon each other. The figure on the left hand in the vignette represents the crystalline lens of the same bird; the lens being subject to great variety of form in different birds. In the Eagle, the proportion of the axis to the diameter of the lens is as three and eight-tenths to five and seven-tenths; in the Great Owl, which seeks its prey at twilight, the relative proportions of the lens are as six and five-tenths to seven and eight-tenths; and in the Swan, which has to select its food under water, the proportions of the lens are as three to three and eight-tenths. Birds have also the power of altering the degree of the convexity of the cornea. With numerous modifications of form, aided by delicate muscular arrangement, birds appear to have the power of obtaining such variable degrees of extent or intensity of vision as are most in accordance with their peculiar habits and necessities.

The Golden Eagle makes a flattened platform nest, or rather a collection of strong sticks, on the high and most inaccessible part of rocks, and requiring a space of several square feet of surface. The female bird, which is considerably larger than the male, lays two, and sometimes three eggs, towards the end of the month of March or the beginning of April. If the eggs are removed, it is said that the bird does not lay any more that season. The egg is about three inches long by two inches and five lines broad, of a dirty white colour, slightly mottled nearly all over with pale reddish brown. An egg of this bird in the collection at the British Museum is so marked; and a representation of the egg, in the excellent work of my friend Mr. W. C. Hewitson on the Eggs of British Birds, is very correctly drawn and coloured. Incubation with the Golden Eagle, according to Mr. Mudie, lasts thirty days, and the young Eaglets are at first covered with greyish white down. They are watched, defended, and plentifully supplied with food by the parent birds. Smith, in his History of Kerry, relates that a poor man in that county got a comfortable subsistence for his family during a summer of famine out of an Eagle's nest, by robbing the Eaglets of the food the old ones brought, whose attendance he protracted beyond the natural time by clipping the wings, and thus retarding the flight of the young birds.

Eagles are said to be very long-lived; one that died at Vienna was stated to have lived in confinement one hundred and four years. Their voice is sharp and loud, consisting generally of two notes, repeated many times in succession. Two birds of this species kept by Mr. Selby "appeared untameable in disposition, their fierceness remaining undiminished through years of confinement. They did not exhibit any partiality even for the person who constantly attended and fed them, but were as ready to attack him as a stranger."

In the menagerie at the Gardens of the Zoological Society there are two Golden Eagles, and four White-tailed Eagles; but the keepers find the Golden Eagles the most tractable of the two species.

"Captain Green, of Buckden in Huntingdonshire, has now in his possession a splendid specimen of the Golden Eagle, which he has himself trained to take hares and rabbits."—*Naturalist for May* 1837.

Mr. Thompson has given the following information on the authority of a sporting friend. "When out hunting among the Belfast mountains, an Eagle appeared above his hounds as they came to fault on the ascent to Devis, the highest of the chain. As they came on the scent again, and were in full cry, the Eagle for a short time kept above them, but at length advanced and carried off the hare, when at the distance of from three to four hundred paces before the hounds."

M. Luighi Benoit of Messina has thus referred to the habits of the Golden Eagle in Sicily. A pair have been seen to hunt in concert for small mammiferous animals in the following manner: one of these birds makes a loud rustling noise by a violent beating of its wings against bushes and shrubs, while the other remains in ambush at a short distance watching for anything that may appear. A rabbit or a hare if driven out, is immediately pounced upon, and the prey thus obtained is shared with its companion.

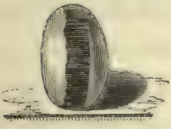
The whole length of an adult male Golden Eagle is nearly three feet; the adult female is still larger. The beak is bluish horn colour, darkest at the tip; the cere yellow; the skin of the lore tinged with blue; the irides hazel, the pupils black; the feathers on the top of the head and back of the neck pointed in shape, and rufous brown: the general colour of the plumage of the body dark brown, the chin and throat particularly so; the wing-primaries nearly black, the secondaries brownish black; the wing-coverts reddish brown, varied with dark brown: the feathers of the belly and thighs bay; those of the tail varied with two shades of brown, the ends dark: the legs covered with bay feathers; the toes yellow and reticulated, except the last or distal joint of each toe, which is covered with three broad scales; the claws are black, the outer claw of each foot the smallest of the four.

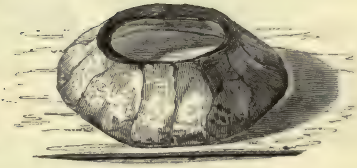
In a younger specimen of the Golden Eagle with the basal or proximal half of the tail white, the feathers on the back of the neck were less rufous, and the general colour of the plumage on the body and wings more uniform, and darker. In this state it is the Ring-tailed Eagle of authors. White varieties of the Golden Eagle have been seen and recorded.

The foot of the Golden Eagle is so distinctly marked from that of the White-tailed, or Cinereous Eagle, as to afford the means of deciding between our two British Eagles at any age; and the three anterior toes of both species are therefore figured as a vignette to the second British Eagle, to show the distinction. The foot on the left hand is that of the Golden Eagle, in which each toe is covered with small reticulations as far as the last phalanx, then with the three broad scales already referred to. In the foot of the White-tailed Eagle, represented by the figure on the right hand, the reticulations are confined to the tarsus, the whole length of each toe being covered with broad scales.

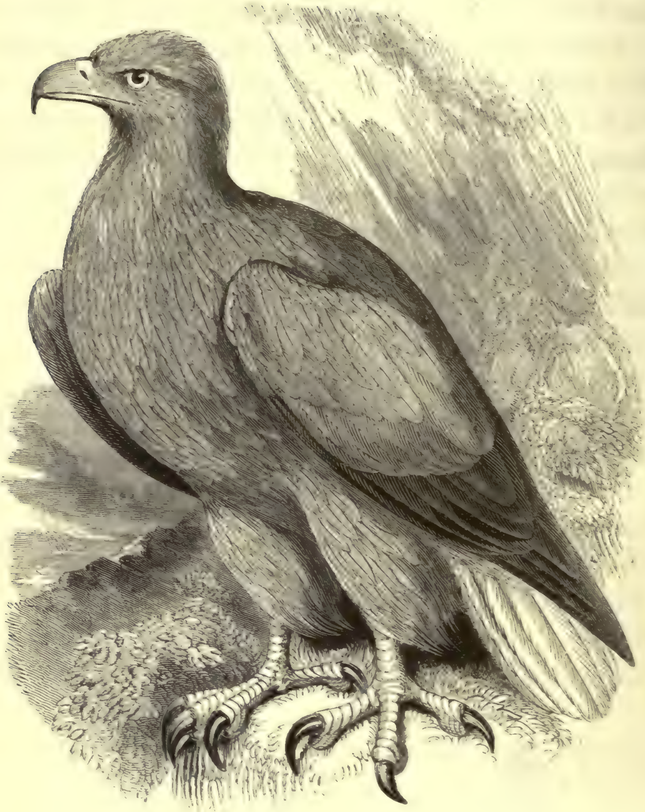
The figure of the Golden Eagle at the head of this article was taken from a fine specimen at the Garden of the Zoological Society, where it has lived for eight years.

The figures below represent the crystalline lens and the bony ring of the eye of the Golden Eagle, referred to at page 15.





RAPTORES. *FALCONIDÆ.*



THE WHITE-TAILED EAGLE,

AND CINEREOUS EAGLE.

Haliæetus albicilla.

Falco albicilla,	*Cinereous Eagle,*	PENN. Brit. Zool. vol. i. p. 209.
" "	" "	MONTAGU, Ornith. Dict.
" "	*White-tailed Eagle,*	BEWICK'S British Birds, vol. i. p. 9.
Aquila "	*The Erne,*	FLEM. Brit. An. p. 53.

Haliæëtus	*albicilla*,	*Cinereous Sea Eagle*,	SELBY, Brit. Ornith. vol. i. p. 18.
Aquila	„	„ *Eagle*,	JENYNS, Brit. Vert. An. p. 80.
Haliæëtus	„	*Sea Eagle*,	GOULD, Birds of Europe, pt. ix.
Falco	„	*Aigle pygargue*,	TEMM. Man. d'Ornith. vol. i. p. 49.

HALIÆETUS. *Generic Characters.*—Beak elongated, strong, straight at the base, curving in a regular arc in advance of the cere to the tip, and forming a deep hook. The upper ridge broad and rather flattened. Edges of the upper mandible slightly prominent behind the commencement of the hook. Nostrils large, transversely placed in the cere, and of a lunated shape. Wings ample; the fourth quill-feather the longest. Legs having the tarsi half-feathered; the front of the naked part scutellated, and the sides and back reticulated. Toes divided to their origin; the outer one versatile. Claws strong and hooked, grooved beneath; the claw of the hind toe larger than that of the inner, which again exceeds that of the middle and outer toes.

MR. SELBY considers the White-tailed Eagle as generically distinct from the Golden Eagle; and the generic characters attributed to it by that gentleman in his ornithological work are therefore inserted here. Other distinguished naturalists have stated the same opinion. In the greater length of its beak, in being less particular in the nature and quality of its food, in its more sluggish habits and comparative want of courage, it has some resemblance to the Vultures.

As a species, it is much more common than the Golden Eagle, and on some parts of the coast may be seen frequently. It inhabits the high rocks and cliffs that overhang the sea, from whence it keeps a look-out, and when hungry is equally ready to seize either fowl or fish, and has been seen to attack and feed on seals. It also evinces a great partiality for fawns and venison, being occasionally killed in deer-parks and forests. Epping Forest, near London, and the New Forest, in Hampshire, are recorded as localities in which it has been shot—in the latter in several successive years; and Mr. Selby, in his Catalogue of the Birds of Northumberland and Durham, printed in the Transactions of the Natural History Society of Newcastle-upon-Tyne, mentions three examples that were shot in Chillingham Park, where they were accustomed to feed upon the fallen deer.

The White-tailed Eagle builds its nest on high rocks, and lays two eggs about the same size as those of the Golden Eagle, but with very little or no red colour on the white ground. The young are at first covered with a soiled white down; and even at this age the beaks and claws of the Eaglets are of very large size. A pair of Golden Eagles have been known to rear their young in the same spot for eight seasons in succession; and Mr. Mudie has mentioned that being thus attached to a particular locality, their young, when able to provide for themselves, are driven away by the parent birds to get their living elsewhere; but the more erratic White-tailed Eagle, quitting the breeding station when the season is over, leave their young to forage over the district in which they have been raised.

This species has been taken in most of the counties on the east coast. A pair were trapped on a rabbit-warren in Suffolk, one of which carried a heavy trap nearly half a mile, and was secured with some difficulty. Six specimens have been killed in Norfolk since the year 1811. Holy Island and St. Abb's Head are localities near which these birds have been occasionally seen. Specimens have also been killed in Hampshire, Devonshire, Somersetshire, and Shropshire. Since the publication of the first edition of this work, one example of this Eagle has been shot at Thetford in Norfolk; one near Weymouth; one at Fawley Court near Henley; and one so near London as Coombe Wood, Wimbledon Common. This last bird was well preserved by Mr. Larkham of Roehampton, for H. R. H. the Duke of Cambridge. Montagu received the young from a nest taken in the county of Down; and from Mr. Thompson I learn that it is not uncommon on the rocky parts of the western and northern coasts of Ireland. Dr. Heysham, in his Catalogue of Cumberland Animals, says that the White-tailed Eagles breed occasionally in the neighbourhood of Keswick and Ulswater. In some parts of Scotland this species may be said to be common. In the third volume of the Reports of the British Association, at page 610, Mr. Selby states, in his notice of the Birds observed in Sutherlandshire in June 1834, where premiums are paid for the destruction of Eagles on account of the injury done to sheep and lambs, that one hundred and seventy-one full grown birds had been killed within the previous three years. Some of these were probably Golden Eagles.

The White-tailed Eagle breeds in the Hebrides, in Orkney, and Shetland. Mr. Dunn, in his useful guide to these latter islands, names the particular localities in which they may be found, but states that they are much more numerous in winter than in summer. This accords with the opinion of M. Temminck and others, that this species returns to the southward from high northern latitudes as the season advances. Mr. Dunn says he once saw, while shooting on Rona's Hill, a pair of Skua Gulls chase and completely beat off a large Eagle. The Gulls struck at him several times, and at each stroke he screamed loudly, but never offered to return the assault. This Eagle frequents Denmark, Sweden, the west coast of Norway, and from thence as far north as Iceland and Greenland, but is not found in North America. M. Temminck believes that this Eagle follows the flocks of Geese that annually resort to the arctic regions in summer to rear their young. It is found in Siberia, at Lake Baikal, and inhabits

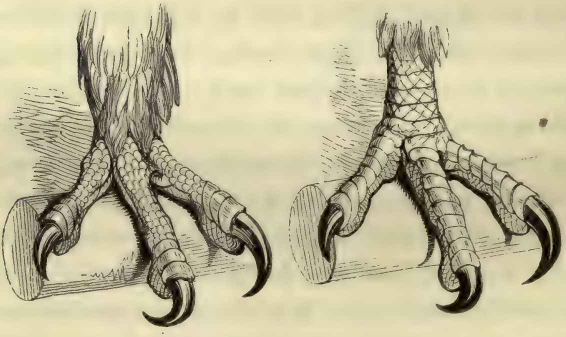
Russia, from whence to the southward it is spread over the European continent generally, and has been taken in Sicily and Corfu.

The whole length of an adult male Cinereous or White-tailed Eagle is about twenty-eight inches; the females are five or six inches longer: the beak and cerè are yellow, the irides straw yellow; the head and neck brownish ash, made up by a mixture of yellowish white and brown, the shaft of each feather the darkest part; body and wings dark brown, intermixed with a few feathers of a lighter colour; primaries nearly black; tail entirely white, and slightly rounded in form, the middle feathers being the longest; the legs and toes yellow; the claws black.

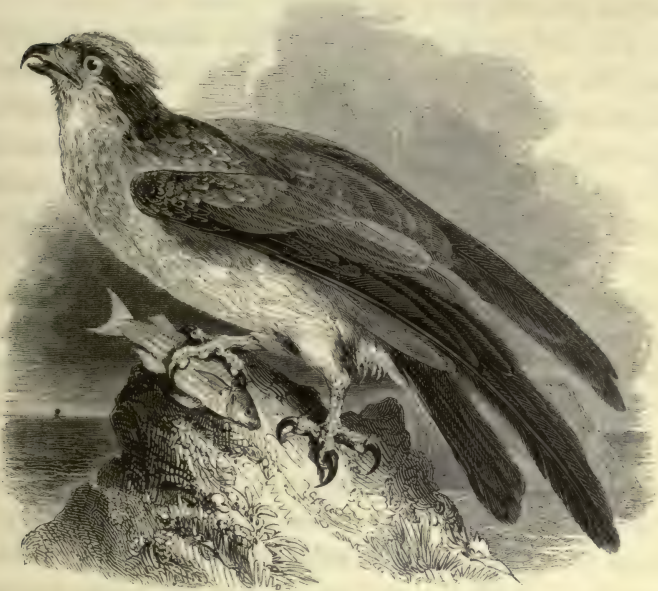
In young birds of this species the beak is horn colour, the cere yellowish brown, the irides brown; the plumage more uniform in colour, and darker; the tail-feathers dark brown. In this state it is the Sea Eagle of many authors.

The vignette below has been already referred to, page 19.

The representation of the White-tailed Eagle here given was taken from a specimen in the Garden of the Zoological Society, where it has lived seven years.



RAPTORES. *FALCONIDÆ.*



THE OSPREY, OR FISHING-HAWK.

Pandion haliæetus.

Falco	*haliæëtus,*	*The Osprey,*	Penn. Brit. Zool. vol. i. p. 214.
,,	,,	,,	Mont. Ornith. Dict.
,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 13.
Balbusardus	,,	,,	Flem. Brit. An. p. 51.
Pandion	,,	,,	Selby, Brit. Ornith. vol. i. p. 24.
Aquila	,,	,,	Jenyns, Brit. Vert. p. 81.
Pandion	,,	,,	Gould, Birds of Europe, pt. vii.
Falco	,,	*Aigle Balbuzard,*	Temm. Man. d'Ornith. vol. i. p. 47.

Pandion. *Generic Characters.*—Beak short, strong, rounded, and broad; cutting edge nearly straight. Nostrils oblong-oval, placed obliquely. Wings long; the second and third quill-feathers the longest. Legs strong and muscular: tarsi short, covered with reticulated scales. Toes free, nearly equal in length; outer toe reversible; all armed with strong, curved, and sharp claws: under surface of the toes rough, and covered with small pointed scales.

The genus *Pandion* was instituted for the Osprey by M. Savigny, and some other species have since been added to this genus by other naturalists.

This bird, from its habit of feeding almost exclusively on fish, must be looked for near the sea-shore, or about rivers and large lakes which may be expected to afford a plentiful supply of the particular food it is known most to delight in. The manner in which the Osprey seeks its prey, and its mode of obtaining it, are admirably described by the Ornithologists of America, in which country this bird is sufficiently numerous to afford excellent opportunities of observing its actions. On one island near the eastern extremity of Long Island, New York, three hundred nests were counted. The old birds were rearing their young close together, living as peaceably as so many Rooks, and were equally harmless in reference to other smaller birds. "When looking out for its prey," says Dr. Richardson, "it sails with great ease and elegance, in undulating and curved lines, at a considerable altitude above the water, from whence it precipitates itself upon its quarry and bears it off in its claws; or it not unfrequently, on the fish moving to too great a depth, stops suddenly in its descent, and hovers for a few seconds in the air, like a Kite or a Kestril, suspending itself in the same spot by a quick flapping of its wings; it then makes a second and, in general, unerring dart upon its prey, or regains the former altitude by an elegant spiral flight. It seizes the fish with its claws, sometimes scarcely appearing to dip its feet in the water, and at other times plunging entirely under the surface with force sufficient to throw up a considerable spray. It emerges again however so speedily, as to render it evident that it does not attack fish swimming at any great depth."

"The versatility of the outer toe of the Osprey, the strength, curvature, and sharpness of its claws, and the roughness of the soles of its feet, are peculiarities of structure adapted to the better securing its slippery prey; and the shortness of its thigh-feathers, unusual in the Falcon tribe, is also evidently connected with its fishing habits." A specimen at the Gardens of the Zoological Society of London, when a fish was given to it was observed to seize it across the body, placing the inner and outer toes at right angles with the middle and hind toes, and digging in the claws, held the fish most firmly by four opposite points; not relaxing its hold or altering the position of the toes, but picking out the portions of flesh from between them with great ease and dexterity.

From the docility observable in the Osprey, Montagu thought that it might formerly have been trained for hawking of fish, as by an Act passed in the reign of William and Mary, persons were prohibited at a certain period of the year, from taking any salmon, salmon-peal, or salmon kind, by *Hawks*, racks, guns, &c.

The Osprey makes a large nest, sometimes on high trees, at others on rocks, or about old ruins near large pieces of water, and lays two or three eggs, which are generally hatched in June. The eggs are about two inches and four lines long by one inch ten lines in breadth, blotched and spotted over the larger end with reddish brown on a white ground. In some specimens the secondary colour is of a paler yellowish red. During the period of incubation, the male watches near, and supplies the wants of the female; catches fish for her, and brings the food to the nest: she therefore seldom quits the eggs, and then only for a very short interval. The parent birds feed the young till they are in the full possession of powers to provide for themselves, and have been seen to supply them with fish long after they had left the nest, and both were flying about on the wing together. The old birds rear but one brood in the year.

Specimens of this bird have been obtained in Sussex, and in almost every other county on our north-east coast: at Hartlepool, Mr. Selby states that one was frequently observed perched on the hull of a vessel that had been wrecked. Two or three specimens have been killed in Durham; and they are said to be observed on the north-west coast of Scotland rather more frequently than elsewhere. Sir William Jardine, in his notes to his edition of Wilson's Birds of America, says, that in Scotland "a pair or two may be found about most of the Highland lochs, where they fish, and, during the breeding season, build on the ruined towers so common on the edges or insulated rocks of these wild waters. The nest is an immense fabric of rotten sticks—

"Itself a burden for the tallest tree,"

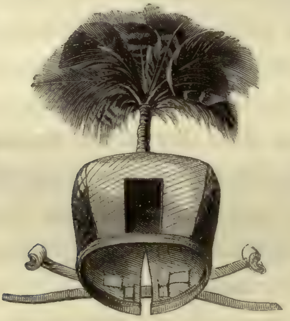
and is generally placed, if such exists, on the top of the chimney; and if this be wanting, on the highest summit of the building. An aged tree may sometimes be chosen; but ruins are always preferred, if near. They have the same propensity of returning to an old station with those of America; and if one is shot, a mate is soon found, and brought to the ancient abode. Loch Lomond, Loch Awe, and Killchurn Castle, and Loch Menteith, have long been breeding-places."

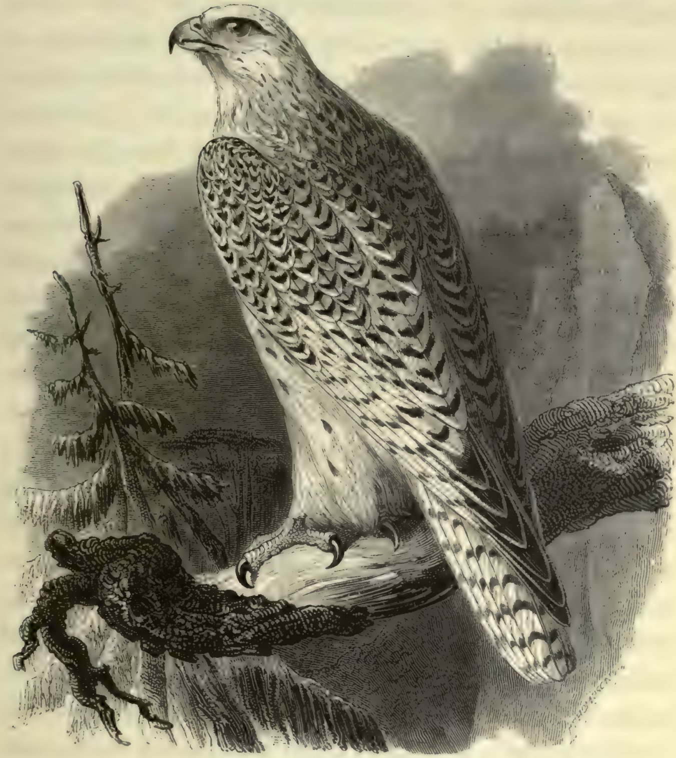
On our southern coast, a specimen was shot in August 1836, in Christchurch Bay, where this bird is called the Mullet Hawk,—a local name for the knowledge of which I am indebted to the kindness of the Earl of Malmesbury, and the figure of the bird here given is represented with a grey mullet under his foot. The Rev. Gilbert White, in his Natural History of Selborne, has also mentioned one that was killed at Frinsham Pond,—a large piece of water about six miles from Selborne. This bird was shot while sitting on the handle of a plough devouring a fish it had caught. Montagu considered that the Osprey was frequent in Devonshire. Dr. Edward Moore, in his Birds of Devonshire, mentions five or six recent instances of its occurrence; and Mr. Couch sends me word that this species is believed to breed every year on the rocks about the Lizard. Of the more inland counties, specimens have been killed in Hertfordshire, Oxfordshire, and Shropshire. In Ireland, the Osprey has been seen by several naturalists about the Lake of Killarney.

It has been already observed that the Osprey is common in North America, where it has an extensive range. Pennant, in his Arctic Zoology, says that it is found in Siberia and Kamtschatka. In high northern latitudes it is migratory, retiring before the appearance of frost. It inhabits Scandinavia, and Russia. In Europe, south of Russia, it is found in Germany, Holland, Switzerland, and the southern provinces: it is found in Sicily, Corfu, and Crete or Candia as it is now called, and in Tripoli and Egypt. M. Temminck, in the third part of his Manual, says that specimens of the Osprey from the Cape of Good Hope, and others from Japan, are similar to those killed in Europe; Mr. Blyth has found it in India, and Sir William Jardine possesses one from New Holland which is in no way different. The geographical range of this species is therefore most extensive.

The Osprey measures about twenty-two inches in length. The beak is black, the cere blue, the irides yellow; the top of the head and nape of the neck whitish, streaked with dark brown, the feathers elongated. The whole of the upper surface of the body and wings dark brown; the ends of the wing-primaries black; the upper surface of the feathers of the tail waved with two shades of brown; the chin and throat white; across the upper part of the breast a few feathers tinged with light brown, forming a band. The under surface of the body, the thighs, and under tail-coverts, white; under surface of the wing white at the axilla, brown on the outer edge; under surface of the wing-primaries dark brown, the shafts white; under surface of the tail-feathers barred with greyish brown on a white ground: the legs and toes blue; the tarsi reticulated; the toes partly reticulated, but with a few broad scales near the end; under surface of the toes covered with short, sharp spines, admirably adapted for holding a smooth and slippery prey: claws long, all of nearly uniform length, crooked, forming one-third of a circle, sharp. and solid,—that is, not grooved underneath; their colour black.

The vignette below represents a Hawk's hood





THE GYR-FALCON.

Falco gyrfalco.

Falco Islandicus,	*Gyrfalcon,*	PENN. Brit. Zool. vol. i. p. 217.
" "	*Jerfalcon,*	MONT. Ornith. Dict.
" *Gyrfalco,*	"	BEWICK, Brit. Birds, vol. i. p. 15.
Gyrfalco candicans,	"	FLEM. Brit. An. p. 51.
Falco Islandicus,	"	SELBY, Brit. Ornith. vol. i. p. 36.
" "	"	JENYNS, Brit. Vert. p. 81.
" "	*Faucon Gerfaut,*	TEMM. Man. d'Ornith. vol. i. p. 17.

FALCO. *Generic Characters.*—Beak short, curved from its base; on each cutting edge of the upper mandible a strong projecting tooth. Legs robust; tarsi short; toes long, strong, armed with curved and sharp claws. Wings long and pointed; the first and third quill-feathers of equal length, the second quill-feather the longest.

Of the true Falcons which the British Islands produce, the Gyr-Falcon may be considered one of the most typical in form, as it is the largest in size. It is an inhabitant of the North of Europe and North America, seldom appearing south of the 52° of latitude, or north of 74°. It is not, however, very numerous anywhere; and from its great courage and strength large sums were formerly expended in procuring specimens from Iceland and Norway, for various potentates of Europe who were then devoted to falconry. Those specimens obtained from Iceland were called exclusively Iceland Falcons; and from peculiarities observed in their disposition, as well as in their mode of flying at their game, not only commanded the highest prices, but they were, and are even now, considered by falconers as a species distinct from the Gyr-Falcon. "They say that these two Falcons differ in the comparative length of their wings in reference to the tail; the Iceland Falcon is, to them, a much more valuable, as well as a much more rare species; that they require a different system of training, as well as of general management. They describe the Iceland Falcon as a bird of higher courage than the Gyr-Falcon; of a more rapid and bolder flight; and that it can be flown successfully at larger game. Its gyrations are said to be wider, its mount higher, and its stoop to the quarry more impetuous, grand, and imposing." Some naturalists believe that the Greenland and Iceland Falcons are distinct species;* others with M. Temminck, consider these birds as local varieties only.

The specimen from which Mr. Bewick took his representation of the Gyr-Falcon is now in good condition in the Museum of Natural History at Newcastle-upon-Tyne, although it must have been preserved more than fifty years. This bird was given at that time to Mr. Tunstall by the then Lord Orford, of sporting notoriety, who had used it for many years in catching hares, rabbits, &c. It came from Iceland.*

---

* See a paper by Mr. John Hancock, Annals of Natural History, vol. ii. page 241.

In reference to keeping this rare species from year to year, Sir John Sebright, in his Observations on Hawking, says—"As it is difficult to procure Icelanders and Gyr-Falcons, these valuable birds are well worth mewing (putting to moult); but as Peregrine Falcons and Goshawks are easily obtained, much trouble and expense will be saved by getting young birds every year; and as these do not cast their wing and tail-feathers the first year, they will be in order to fly in the autumn, when the older birds will be in moult." When kept for flying over their moult, they are then called Intermewed Hawks.

The Peregrine Falcon being much more numerous as a species, and much more easily procured, was more particularly the object of the falconer's care and tuition; and in the history of that bird, which follows next in the series, a few observations on the powers of flight and the mode of using the Falcons will be introduced.

From the great strength and courage of the Gyr-Falcon, it was usual to fly them at birds of large size; such as Cranes, Storks, Herons, and Wild Geese.

The Gyr-Falcon is said to build annually on the rocky coasts of Norway, Iceland, and Greenland. Two eggs in my own collection I believe to belong to this species: the length is two inches and three-eighths, the transverse measurement one inch seven-eighths; both are mottled nearly all over with pale reddish brown on a dull white ground; they are larger than those of the Peregrine Falcon, but very similar in shape and colour, as well as in the mode in which the colour is disposed over the surface.

---

* G. T. Fox, Esq., Synopsis of the Newcastle Museum, p. 52.

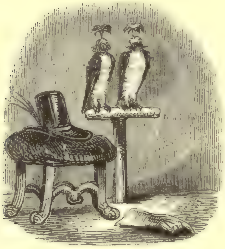
These birds defend their young with great courage and perseverance. Dr. Richardson says, "In the middle of June 1821, a pair of these birds attacked me as I was climbing in the vicinity of their nest, which was built on a lofty precipice on the borders of Point Lake, in latitude 65½°. They flew in circles, uttering loud and harsh screams, and alternately stooping with such velocity, that their motion through the air produced a loud rushing noise: they struck their claws within an inch or two of my head. I endeavoured by keeping the barrel of my gun close to my cheek, and suddenly elevating its muzzle when they were in the act of striking, to ascertain whether they had the power of instantaneously changing the direction of their rapid course, and found that they invariably rose above the obstacle with the quickness of thought, showing equal acuteness of vision and power of motion. Although their flight was much more rapid, they bore considerable resemblance to the Snowy Owl."

This species appears but very seldom in the southern parts of the British Islands. Dr. Edward Moore of Plymouth has recorded a notice of one taken in Devonshire so lately as the year 1834. Dr. Borlase, in his History of Cornwall, refers to the occurrence of one at Helston. The bird from which the representation here given was made, was killed in Pembrokeshire, on the estate of the Earl of Cawdor, by whom the specimen was presented to the Zoological Society. In Ireland, Mr. Thompson has noticed two occurrences of the Gyr-Falcon: one in 1803 and another in 1837.

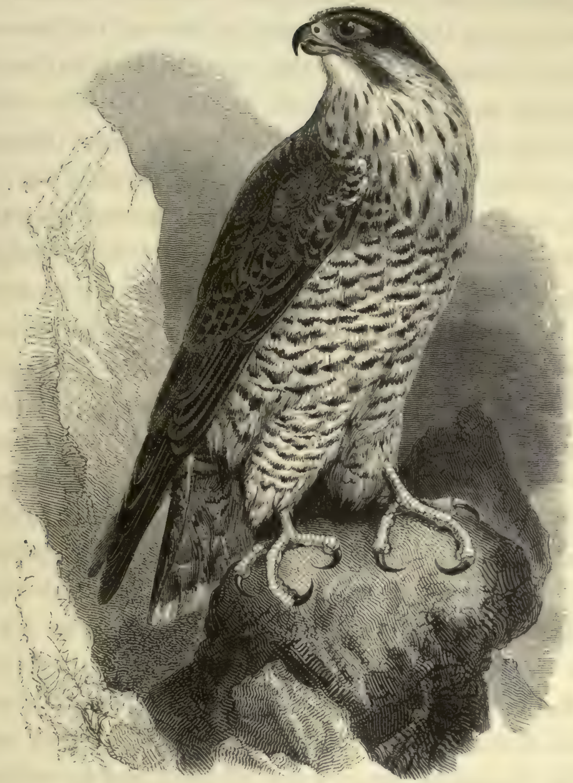
In a Catalogue of the Birds of Norfolk and Suffolk, by Messrs. Sheppard and Whitear, published in the fifteenth volume of the Transactions of the Linnean Society, mention is made of a specimen that was shot on Bungay Common. By the kindness of Mr. Allis of York, I have heard that a very fine adult specimen was shot within a few miles of that city on the 15th March 1837. One of the specimens now in the Museum of Newcastle-upon-Tyne was killed in Northumberland; in the month of January of the present year, 1845, an Iceland Falcon was shot near the North Tyne. Pennant possessed one that was shot near Aberdeen. Mr. Low in his Fauna of Orkney, considered the Gyr-Falcon as only an occasional visitor: Mr. Bullock, when he visited the Orkneys, saw one sitting on a stone wall in the island of Stronsa; but its appearance has not been observed by more recent Ornithologists. As before mentioned, its true habitat appears to be in higher northern latitudes,—Norway, Iceland, Greenland, Siberia, Russia, and occasionally the north of Germany; but apparently in no country more plentiful than in North America. Dr. Richardson says, "We saw it often during our journeys over the Barren Grounds, where its habitual prey is the Ptarmigan, but where it also destroys Plover, Ducks, and Geese."

Major Sabine, in his Memoir on the Birds of Greenland, says, "The progress of this bird from youth, when it is quite brown, to the almost perfect whiteness of its maturity, forms a succession of changes in which each individual feather gradually loses a portion of its brown colour as the white edging on the margin increases in breadth from year to year." Dr. Richardson also, who has had favourable opportunities for observing this species at different ages, says, "The young Gyr-Falcons show little white on their plumage, being mostly of a dull brown colour above. As they grow older, the white margins encroach on the brown, which becomes merely a central blotch, indented on each side by the white; while in aged birds the plumage is mostly pure white, varied only by a few narrow transverse bars on the upper parts."

These coinciding observations from two distinguished naturalists render any attempt at a technical description unnecessary, beyond adding that the specimen from which the present figure was taken measured twenty-three inches in length from the point of the beak to the end of the tail: the beak itself pale bluish horn colour, the cere yellow; the irides dark, as are those of all the true Falcons: the head, neck, chest, under surface of the body, and under tail-coverts, become pure white before the greyish brown spots and bars are lost on the back and upper surface of the wings; the wing-primaries are dark at the tip, but do not reach to the end of the tail: the tarsi and toes are yellow; the claws black, curved, and sharp.



RAPTORES. *FALCONIDÆ.*



THE PEREGRINE FALCON.

Falco peregrinus.

Falco peregrinus,		*Peregrine Falcon,*		Penn. Brit Zool. vol. i. p. 218.
,,	,,	,,	,,	Mont. Ornith. Dict.
,,	,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 17.
,,	,,	,,	,,	Flem. Brit. An. p. 49.
,,	,,	,,	,,	Selby, Brit. Ornith. vol. i. p. 39.
,,	,,	,,	,,	Jenyns, Brit. Vert. p. 82.
,,	,,	,,	,,	Gould, Birds of Europe, pt. xiv.
,,	,,	*Faucon pelerin,*		Temm. Man. d'Ornith. vol. i. p. 22

The great docility of the Peregrine Falcon, and the comparative ease with which the birds are procured, has rendered them the most frequent objects of the falconer's care and tuition, and it is this species which is the most commonly used at the present day by those who still occasionally pursue the amusement of hawking. Formerly this sporting diversion was the pride of the rich, and these birds, as well as their eggs, were preserved by various legislative enactments. So valuable were they considered when possessed of the various qualities most in request, that in the reign of James I. Sir Thomas Monson is said to have given one thousand pounds for a cast (a couple) of Hawks. The qualities of a good Falcon have been so aptly described by Walton in his Complete Angler as addressed by Auceps to his companions, that illustrating the powers and habits of the bird, it is here in part introduced. "In the air my noble, generous Falcon ascends to such a height, as the dull eyes of beasts and fish are not able to reach to; their bodies are too gross for such high elevation; but from which height, I can make her to descend by a word from my mouth, which she both knows and obeys, to accept of meat from my hand, to own me for her master, to go home with me, and be willing the next day to afford me the like recreation."

How much the former predilection for this particular sport has now subsided, may be learned from the following paragraph in Sir John Sebright's Observations upon Hawking, published in 1826. "The village of Falconswaerd, near Bois-le-Duc, in Holland, has for many years furnished falconers to the rest of Europe. I have known many falconers in England, and in the service of different princes on the Continent; but I never met with one of them who was not a native of Falconswaerd. It has been the practice of these sober and industrious men to stay with their employers during the season for hawking, and to pass the remainder of the year with their families at home. John Pells, now in the service of my friend John Dawson Downes, Esq. of Old Gunton Hill, Suffolk, and who also manages the Heron Hawks kept by subscription in Norfolk, is (I believe) the only efficient falconer by profession now remaining; all the others whom I remember are either dead or worn out, and there has been no inducement to younger men to follow the employment of their forefathers."

The Peregrine Falcon builds on high rocks on various parts of the coast, but is more numerous in Scotland than in England. The eggs are from two to four in number, about two inches long by one inch and eight lines in breadth, mottled all over with pale reddish brown. The old Falcons obtain a plentiful supply of food for themselves and their brood by preying upon the numerous aquatic birds that rear their young in the same localities. Mr. Selby, in one of his papers on the Birds observed in the vicinity of St. Abb's Head, says, "that the eyrie of the Peregrine Falcon had long been established there. A pair of old ones and a pair of young birds were seen at this visit. It was from this locality that the late Mr. Baird of Newbyth usually obtained his cast of Hawks, for each of which he gave the person who undertook the perilous task of scaling the precipice one guinea. The castings of these birds, Mr. Selby noticed, were scattered in great profusion upon the tops of the cliffs: those examined were almost wholly composed of the bones and feathers of gulls and other aquatic fowl; others were mixed with the feathers of partridges, and the bones of rabbits and young hares."

Falcons, Hawks, and probably most, if not all other birds of prey, from feeding on birds and animals covered with feathers or fur, and thus swallowing a quantity of indigestible matter, relieve themselves by throwing it up in the form of castings, which are oblong balls, consisting of the feathers or hair and bones forcibly compressed together.

This habit of reproducing at will from the stomach the remains of the last meal is common to the Shrikes, the Swallows, and most of the insectivorous birds which feed on *coleoptera*, or those insects possessed of strong and hard external wing-cases.

In the language of Falconry, the female Peregrine is exclusively called the Falcon, and on account of her greater size, power, and courage, is usually flown at Herons and Ducks: the male Peregrine, being smaller, sometimes one-third less than the female, is called the Tercel, Tiercel, and Tiercelet, and is more frequently flown at Partridges, and sometimes at Magpies. Young Peregrines of the year, on account of the red tinge of their plumage, are called, the female, a Red Falcon, and the male, a Red Tiercel, to distinguish them from the older birds; the names also of Eyas, or Nyas; Gentil; Peregrine or Passage; and Haggard, are also applied to them according to their age when taken. If kept over a moult they were then called intermewed Hawks. The Lanner of Pennant is a young female Peregrine, at which age it bears some resemblance to the true Lanner, *Falco lanarius* of authors,—a true Falcon also, but much more rare than the Peregrine, and which probably has never been killed in this country. Mr. Gould says he was unable to find a specimen in any collection here, either public or private, at the time he was desirous of figuring this species in his Birds of Europe. The true Lanner is only found in the south and south-eastern parts of Europe. "The King of France, Louis XVI. had Lanners sent annually from Malta; but they were brought from the eastern countries. It exceeds the Peregrine Falcon in size, being intermediate between that and the Gyr-Falcon; was much esteemed for flying at the Kite, with which the Peregrine is hardly able to contend." The name of Lanner is confined to the female; the male is called a Lanneret, on account of his smaller size. This species is said to have been called *lanarius*, from the woolly softness and thickness of its plumage. It is also said that nestling Lanners are brought from Sicily, where this species breeds on rocks.

Sir John Sebright, in his Observations on Hawking, before quoted, thus describes the mode of flying Peregrine Falcons at Herons, as practised in Norfolk:—"A well-stocked Heronry in an open country is necessary for this sport; and this may be seen in the greatest perfection at Didlington in Norfolk, the seat of Colonel Wilson. This Heronry is situated on a river, with an open country on every side of it. The Herons go out in the morning to rivers and ponds at a very considerable distance in search of food, and return to the Heronry towards the evening.

It is at this time that the falconers place themselves in the open country, down wind of the Heronry; so that when the Herons are intercepted on their return home, they are obliged to fly against the wind to gain their place of retreat. When a Heron passes, a cast (a couple) of Hawks is let go. The Heron disgorges his food when he finds that he is pursued, and endeavours to keep above the Hawks by rising in the air; the Hawks fly in a spiral direction to get above the Heron, and thus the three birds frequently appear to be flying in different directions. The first Hawk makes his stoop as soon as he gets above the

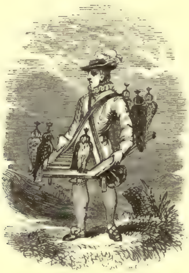
Heron, who evades it by a shift, and thus gives the second Hawk time to get up, and to stoop in his turn. In what is deemed a good flight, this is frequently repeated, and the three birds often mount to a great height in the air. When one of the Hawks seizes his prey, the other soon *binds to him*, as it is termed, and buoyant from the motion of their wings, the three descend together to the ground with but little velocity. The falconer must lose no time in getting hold of the Heron's neck when he is on the ground, to prevent him from injuring the Hawks. It is then, and not when he is in the air, that he will use his beak in his defence. Hawks have, indeed, sometimes, but very rarely, been hurt by striking against the Heron's beak when stooping; but this has been purely by accident, and not, as has been said, by the Heron's presenting his beak to his pursuer as a means of defence. When the Heron flies down wind, he is seldom taken, the Hawks are in great danger of being lost, and as the flight is in a straight line, it affords but little sport."

So bold as well as rapid is the Peregrine Falcon, that it has frequently interfered and robbed the sportsman of his game in the manner described under the article "Golden Eagle," of which instances are related by Mr. Selby and others. This species has been most aptly termed *peregrinus*, since it has been found in very distant parts of the world; its extraordinary powers of flight being probably one great cause of extensive geographical distribution. In this country it makes its nest on the high cliffs between Freshwater Gate and the lighthouse, near the Needle Rocks, and in some other parts of the Isle of Wight. In Devonshire and Cornwall it is known by the name of the Cliff-Hawk. Pennant has recorded a locality on the rocky coast of Caernarvonshire. The young have been obtained from the rocks about Holyhead, and the Great Orme's Head; and in Ireland, Mr. Thompson informs me it is not uncommon in rocky situations inland as well as marine. Mr. Selby, in the Proceedings of the Berwickshire Naturalists' Club, has noticed both adult birds and their young in the vicinity of St. Abb's Head; in Scotland it is also well known, and Sir William Jardine, in his Notes on this bird, in his edition of Wilson's American Ornithology, names the Vale of Moffat in Dumfriesshire, the Bass Rock, and the Isle of May in the Forth, as places in which these noble birds rear their young, returning to the same spot, for the same purpose, many years in succession. This species breeds annually in the Outer Hebrides and the Shetland Isles, and is found also in Denmark, Sweden, Norway, and Lapland. Pennant, in his Arctic Zoology, includes the Peregrine as an inhabitant of the Uralian and Siberian Mountains; and it is found also in Greenland. In North America and the United States this species is well known, and its habits are described by the various naturalists who have written on the birds of that country. Captain King, when surveying the Straits of Magellan, found two birds which he considered to be young Peregrines. It is found at Corfu, Sicily, and Malta; Dr. Andrew Smith has recorded it as inhabiting the vicinity of the Cape of Good Hope; Mr. Blyth has found it in India; and Mr. Vigors and Dr. Horsfield have included this species in their Catalogue of the Birds of New Holland, published in the Transactions of the Linnean Society.

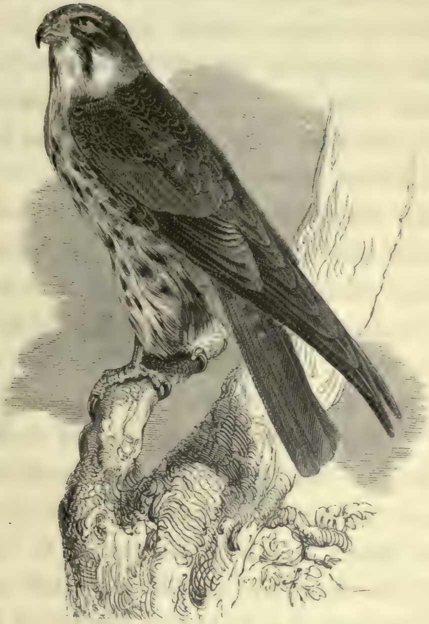
The whole length of an adult Peregrine Falcon is from fifteen to eighteen inches, depending on the sex and age of the bird. The beak is blue, approaching to black at the point; the cere and eyelids yellow, the irides dark hazel brown; the top of the head, back of the neck, and a spot below the eye, nearly black; the back and upper surface bluish slate or ash colour, becoming lighter in colour at every succeeding moult, the males usually the most so: the feathers of the back, wing-coverts, and tail, barred with a darker tint; the primary wing-feathers brownish black, the inner webs barred and spotted with rufous white; the front of the neck white, with dark longitudinal lines; the breast rufous white, with dark brown transverse bars; the flanks, under tail-coverts, and the under surface of the tail-feathers, barred transversely with dark brown and greyish-white; legs and toes yellow, the claws black. The figure here given was taken from a very fine female of large size, in its second year, but still retaining one outer tail-feather of the first year on each side. The wing and tail-feathers are not changed in the *Falconidæ* in their first autumn.

Young Peregrines have the head and upper surface of the body and wing-coverts of a brownish ash-colour, the edge of each feather rufous; the dark longitudinal streaks on the white under side of the body more conspicuous, but gradually shortening and spreading laterally, ultimately change their direction, and become transverse. This change is first observed on the feathers of the belly and flanks.

The vignette below represents the falconer bearing his Hawks to the field.



RAPTORES. *FALCONIDÆ.*



THE HOBBY.

Falco subbuteo.

Falco subbuteo,	*The Hobby,*	Penn. Brit. Zool. vol. i. p. 247.
"	"	Mont. Ornith. Dict.
"	"	Bewick, Brit. Birds, vol. i. p. 42.
"	"	Flem. Brit. An. p. 49.
"	"	Selby, Brit. Ornith. vol. i. p. 43.
"	"	Jenyns, Brit. Vert. p. 82.
"	"	Gould, Birds of Europe, pt. vi.
"	*Faucon Hobereau,*	Temm. Man. d'Ornith. vol. i. p. 25.

The Hobby, a true Falcon, though of small size, may be considered a Peregrine Falcon in miniature, but is rather less bulky in proportion to the whole length; the body of the bird being slender, the tail elongated, and the points of the wings reaching even beyond the tail. In this country the Hobby is a summer visitor, appearing in April, and leaving again generally in October for warmer regions, like other summer visitors. Dr. Heysham, however, in his Catalogue of Cumberland Animals, mentions having seen a Hobby as late as November.

Unlike the Peregrine, the Hobby appears to prefer inland situations among wooded and well-cultivated districts, and possessing considerable power of flight, as well as persevering endurance, was formerly trained to fly at Larks, Quails, and Snipes. Sir John Sebright says, the Hobby will take small birds if thrown up by the hand, but is not strong enough to be efficient in the field. Colonel Montagu says, he has "frequently witnessed the flight of this species in pursuit of a Skylark, which appears to be its favourite game; and it is astonishing to observe how dexterously the little bird avoids the fatal stroke until it becomes fatigued. A Hobby in pursuit of a Lark was joined by a Hen-Harrier, who not being so rapid on wing, was usually behind, and ready to avail himself of the sudden turns the unfortunate Lark was compelled to make to avoid the talons of the Hobby: however, after numberless evolutions, the Hen-Harrier relinquished further pursuit, being unequal to the chase, and left the deadly stroke to one better adapted for rapid and durable flight, and aërial evolutions. The country was open, and as far as the eye could discern, the chase continued, but doubtless without a chance of the Lark's avoiding the fatal blow." The Hobby has been known to dash through the open window of a room at a small bird confined in a cage, and is sometimes used by London bird-catchers to enable them by its presence, and by exhibiting it in a particular way, to catch male Skylarks;[*] but it is more common with them to use the stuffed skin of a small Hawk or Owl, with its wings extended, than a living bird. The mode of proceeding will be described under the article on the Skylark.

The Hobby, though a well-known bird, is not very numerous as a species. It chooses a high tree to make its nest on, occasionally taking to the remains of one of suitable size that has been deserted. The female lays three or four eggs, like those of all the true Falcons in shape and colour,—that is, of a short oval form, speckled all over with reddish brown on a dirty white ground;—the length, one inch eight lines; the breadth, one inch four lines.

The localities to be quoted for the Hobby, though extending over considerable geographical range, are not very numerous. Dr. Moore has noticed it in Devonshire, and finds that it breeds in Warleigh Woods. From Mr. Thompson of Belfast, I have received the information that this species occurred twice to the late Mr. Templeton, and was said to have been found breeding among rocks on the mountains of Wicklow and Londonderry. Mr. Doubleday has obtained two specimens in the vicinity of Epping; and Mr. Paget says it is not uncommon during summer in Norfolk. In the collection of Messrs. Hancock at Newcastle, is a specimen killed in the county of Durham. Muller says it inhabits Denmark and Norway; and Pennant, in his Arctic Zoology, says it visits Siberia.

The Hobby is an inhabitant of the continent of Europe generally; it is found at Corfu, Sicily, and Malta. The Zoological Society possess specimens from Tangiers; and it is most probably spread over the northern part of Africa:

---

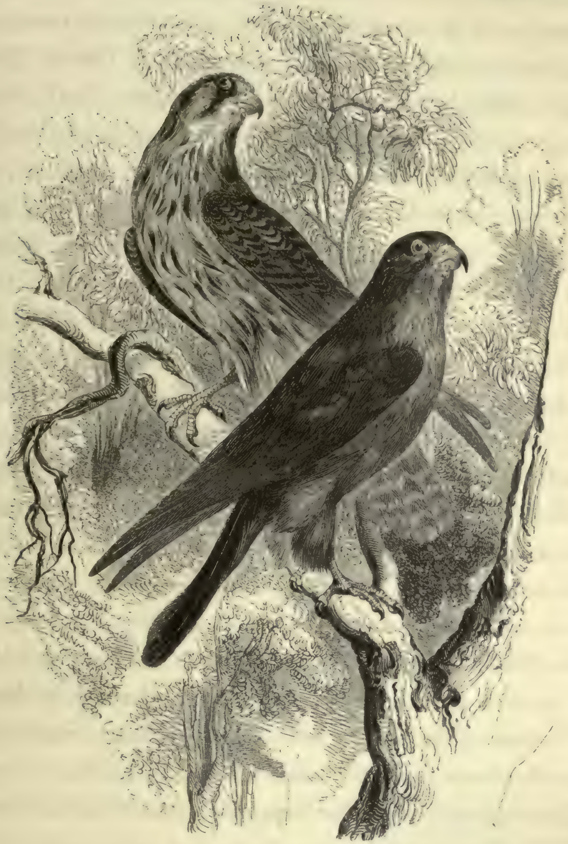
[*] In reference to the various modes of taking Larks with the Hobby, one of the old names for this species was *alaudarius*.

Dr. Andrew Smith considers it as an inhabitant also of South Africa in the vicinity of the Cape. From the eastern part of Europe the Hobby is traced to Astrachan and to India. Mr. Selby mentions having received specimens from that country in every respect similar to our own; and a collection of birds exhibited at the Zoological Society in 1831, which was formed by Major James Franklin on the Ganges between Calcutta and Benares, also contained specimens of the Hobby.

The food of this species appears to consist of small birds and large coleopterous insects. My friend Mr. Henry Doubleday sent me word that the stomachs of two specimens examined by him were filled with the common dung-chaffer, *Geotrupes stercorarius*.

Specimens of the Hobby measure from twelve to fourteen inches, depending on age or sex. The male bird from which the figure was taken had the beak bluish horn colour, darkest at the tip; the cere greenish yellow, the irides dark brown; the top of the head, nape, back and upper wing-coverts, greyish black; the edges of the feathers buffy white; the wing-primaries and secondaries nearly black, edged with dull white: the two middle tail-feathers uniform greyish black; the others slightly barred with a lighter colour. The tips also lighter; the chin and side of the neck white; the cheek and moustache black; the breast, belly, and thighs, yellowish white, with longitudinal patches of brownish black; under tail-coverts dull white; under surface of the tail-feathers barred with dull white and greyish black; the legs and toes yellow; the claws black.

Old birds have the upper surface of the body inclining to bluish grey; in young birds the plumage is tinged with rufous.



THE RED-FOOTED FALCON.

Falco rufipes.

Falco rufipes,	*Orange-legged Hobby,*	Selby, Brit. Ornith. vol. i. p. 45.
" "	*Red-legged Falcon,*	Jenyns, Brit. Vert. p. 83.
" "	*Red-footed Falcon,*	Gould, Birds of Europe, pt. i.
" "	*Red-legged Falcon,*	Eyton, Rare British Birds, p. 5.
" "	*Faucon à pieds rouges,*	Temm. Man. d'Ornith. vol. i. p. 33.

The Red-footed Falcon is a species of small size, and so much in its general contour resembling the Hobby, that

Buffon described and figured the adult male as a singular variety of that bird. The young female has more the appearance of a young Merlin. One specimen caught in Berkshire is recorded by F. Holme, Esq. of Christ Church College, Oxford, and a second by the Rev. N. C. Strickland, obtained in Yorkshire. Four examples of this Falcon were killed in the county of Norfolk in 1830, three of which were shot by Mr. Heath at Horning; and since that period several others have occurred in different parts of England, and one in Ireland. M. Vieillot, in the *Faune Francaise*, says that it builds in the hollows of trees, or takes to the nest of the Magpie, and that it flies and hawks for its prey only in the evening. It has lately been stated to breed on the Pyrenees, and to lay four eggs; a drawing of an egg sent me resembles that of the Merlin in form and colour, but is a little smaller in size. Its food is ascertained to be small birds and large coleopterous insects, the more indigestible parts of which have been found in the stomach.

The Red-footed Falcon is a native of Russia, Poland, and Austria, from whence it passes southward in Europe to Provence, Tuscany, Corfu, Sicily, Malta, and Crete; it has also been shot at Trebizond, and in India.

Since my notice of the four specimens killed in Norfolk in 1830, other examples have been shot in the same county in 1832, and 1843. Two specimens have been obtained in Yorkshire, and one in the county of Durham. An adult female specimen lived two years in the menagerie of the Zoological Society. A specimen is preserved in a museum at Devonport, which was obtained not far off; and Mr. Thompson of Belfast has recorded a notice of one that was killed in the county of Wicklow in the summer of 1832.

This recent addition to our catalogue of British Birds goes through several interesting changes of plumage; and as the species is somewhat new to us, these different appearances are here described in detail.

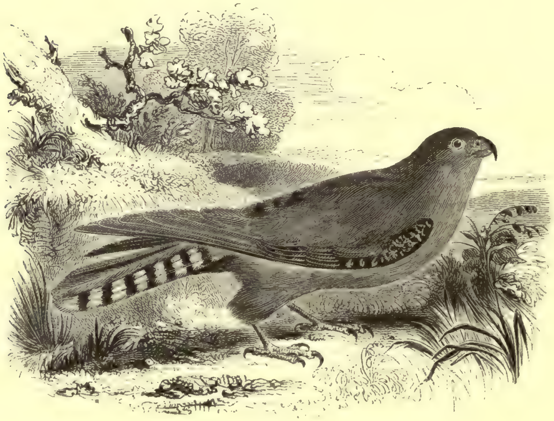
The upper figure in the wood-engraving represents a young female; the lower figure is that of an adult male.

After their first change, the plumage of the males is much more uniform than that of the females. In the adult male, the base of the beak is yellowish white, the other part dark horn colour; the cere and eyelids reddish orange, the irides dark brown; the head, neck, back, upper surface of the wings and tail, the throat, breast, and belly, of a uniform dark lead colour; the thighs, vent, and under tail-coverts, deep ferruginous; the legs and toes reddish flesh colour; the claws yellowish white, with dusky tips. The whole length of the bird eleven inches.

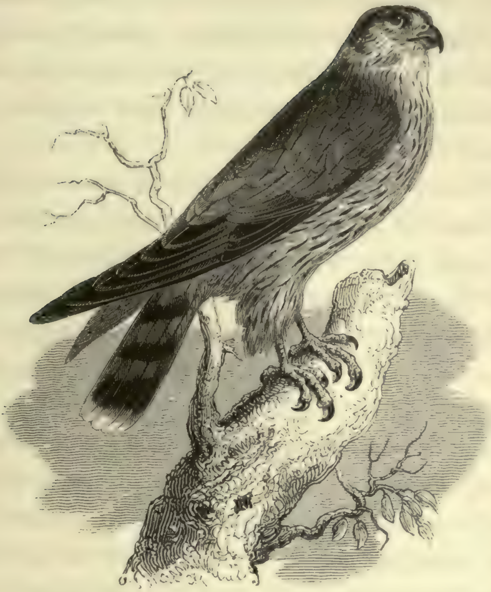
The plumage of the young males before their first change is similar to that of young females, which will hereafter be described. At their first change, they become of a uniform pearl grey; the thighs and flanks ferruginous; beak, cere, eyes, legs, toes, and claws, as in the old male. The representation used as a vignette is taken from a young male bird that has nearly completed his first change, but still retains a portion of the barred appearance of his first livery on the outer or distal part of the wing, on the lower part of the back, and the tail-feathers, the central pair only of which are as yet moulted.

The adult female has the beak, cere, irides, legs, &c. as in the male; the head and back of the neck reddish brown; the eye surrounded with dusky feathers almost black; the whole of the back, wing-coverts, and tail-feathers, blackish grey, barred transversely with bluish black; upper surface of the wing-primaries uniform dusky black. The chin and throat nearly white; the breast and all the under surface of the body pale rufous, with dark reddish brown longitudinal streaks; the thighs and their long feathers plain rufous; under wing-coverts rufous, with transverse bars of dark brown; under surface of the wing-primaries blackish grey, with numerous transverse bars of bluish grey: under surface of the tail-feathers bluish grey, with nine or ten transverse bars of bluish black, the bars increasing a little in breadth as they approach the tip.

Young females have the top of the head reddish brown with dusky streaks; the eyes encircled with black, with a small black pointed moustache descending from the anterior part of the eye; ear coverts white: upper surface of the body dark brown, the feathers ending with reddish brown; wing-primaries dusky black, the inner edges and tips buffy white; the tail-feathers dark brown, with numerous transverse bars of reddish brown; throat white: sides of the neck, the breast, and all the under surface of the body, pale reddish white, with brown longitudinal streaks and patches on the breast; the thighs and their long feathers uniform pale ferruginous; beak, cere, irides, &c. as in the adult female.



RAPTORES. *FALCONIDÆ.*



THE MERLIN.

Falco æsalon.

Falco æsalon, The Merlin,	Penn. Brit. Zool. vol. i. p. 251.
,, ,, ,,	Mont. Ornith. Dict.
,, ,, ,,	Bewick. Brit. Birds, vol. i. p. 48.
,, ,, ,,	Flem. Brit. An. p. 50.
,, ,, ,,	Selby, Brit. Ornith. vol. i. p. 51.
,, ,, ,,	Jenyns, Brit. Vert. p. 83.
,, ,, ,,	Gould, Birds of Europe, pt. vi.
,, ,, *Le Faucon Emérillon,*	Temm. Man. d'Ornith. vol. i. p. 27.

The Merlin is one of the smallest of the British *Falconidæ*, and being of rapid flight and great courage, possesses, on a diminished scale, all the attributes and characters of a true Falcon. So bold as well as powerful, in proportion to his size, is this little bird, that a male Merlin, not weighing more than six ounces, has been seen to strike and kill a Partridge that was certainly more than twice his own weight; and so tenacious generally is he of his prey, that it is very difficult to make him quit anything he has taken. The more common food of this species is small birds.

The Merlin was formerly, and is now occasionally, trained; and Sir John Sebright, in the pamphlet already quoted, says, "He will take Blackbirds and Thrushes. He may be made to *wait on*, that is, hover near, till the bird to be pursued is started again; but though a Merlin will sometimes kill a Partridge, they are not strong enough to be effective in the field."

The Merlin was formerly considered to be only a winter visitor in this country; but it is now very well ascertained that this species breeds on the moors of some northern counties. Mr. Selby has found the nest several times in Northumberland; and Dr. Heysham mentions three instances that came to his knowledge of Merlins' nests in Cumberland, where, he says, this bird remains all the year. Mr. Eyton tells me that it breeds on Cader Idris; and Mr. Dovaston sent a notice to his friend Mr. Bewick, "on the authority of the gamekeeper at Wynstay Park, North Wales, that he had often seen the nest of the Merlin, and that it built and bred there in the summer of 1826." In the more southern counties of Cornwall and Devonshire, the Merlin is considered to be rare, and only seen in winter. On our eastern coast it is killed, but not very often, in Kent, Essex, and Norfolk. The specimens obtained are generally young birds; and these occur most frequently in autumn, or at the beginning of winter. In Ireland, according to Mr. Thompson, the Merlin is indigenous in several northern counties. It breeds also in Scotland, in Orkney, and in Shetland; and is included by Muller and M. Nilsson among the birds of Denmark, Sweden, and Norway. It inhabits Germany and France, and from thence southward to the shores of the Mediterranean. It has been found in Sicily and Malta. Mr. Strickland includes the Merlin among the birds seen by him at Smyrna in the winter of 1835-6; but it was considered rare: it has been found also at Erzeroom and in Egypt. Dr. Andrew Smith obtained examples of it as far south as the vicinity of the Cape of Good Hope; but this last may prove not to be identical with the true Merlin of Europe.

Dr. Richardson obtained two specimens of the Merlin in the fur-countries of the North American continent, both of them females, one of which is figured by Mr. Swainson in the *Fauna Boreali-Americana;* but this bird is not recognised by name as going so far south on that continent as the United States, since it is not mentioned by Wilson or Mr. Nuttall, or Mr. Audubon.

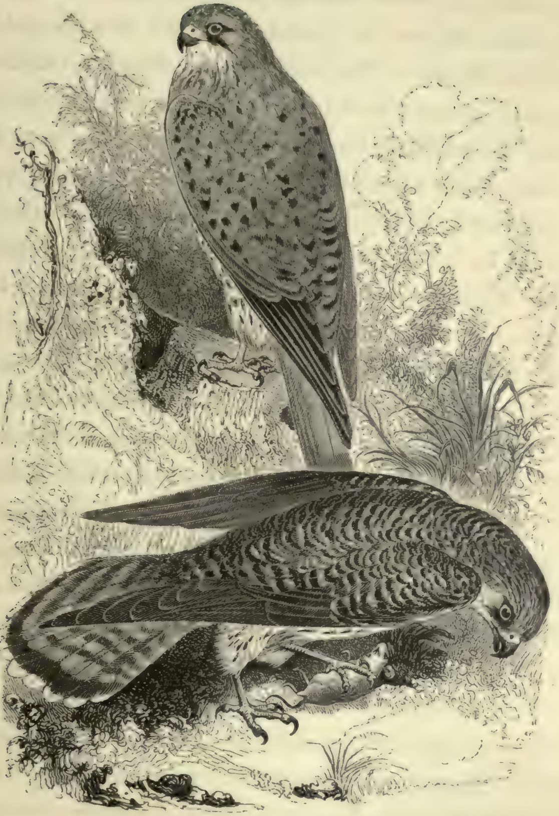
The Merlin makes its scanty nest on the ground, laying four or five eggs, mottled all over with two shades of reddish brown, and measuring one inch seven lines in length, by one inch three lines in breadth. In North Wales, the young birds are called Stone Falcons; but among Ornithologists the Stone Falcon is considered to be an adult bird. It is not, however, improbable that the habit of sitting on a bare stone or portion of rock, by which this species has acquired the name of Stone Falcon, is common to it at all ages, and in other countries. In France it is called *Le Rochier*, and *Faucon de Roche;* and in Germany, *Stein Falke.* This bird occasionally builds on rocks.

The Merlin measures from ten to twelve inches in length, depending on the sex of the specimen. An old male has the beak bluish horn colour, palest at the base, darkest towards the tip; the cere yellow, the irides dark brown; the top of the head blue grey, with dark lines passing backward; the cheeks, and from thence round the back of the neck, pale reddish brown, also marked with dark streaks, forming a collar; the whole of the back and wing-coverts fine blue grey,* the shaft of each feather forming a dark central line; wing-primaries pitch black; upper surface of the tail-feathers bluish grey over two-thirds of their length, with slight indications of three dark bands, the distal third nearly uniform black, the tips of all the feathers white; the chin and throat white; breast, belly, thighs, and under tail-coverts, rufous, with brown central patches, and darker brown streaks; under surface of the tail-feathers barred with two shades of grey, a broad dark terminal band, and white tips; legs and toes yellow; claws black.

In the female, the top of the head, back, wing-coverts, and secondaries are dark liver brown, the shaft of each feather darker, the edge tipped with red; the tail-feathers brown, with five narrow transverse bars of wood brown; under surface of the body pale brownish white, with darker brown longitudinal patches; the beak, cere, eyes, legs, toes, and claws as in the male. Young males resemble the females; and in birds of the year, the wings do not reach so far towards the end of the tail as in those that are adult.

---

* "The Elfin king, like the Merlin's wing,
Are his pinions of glossy blue."
Lewis's Tales of Wonder.



THE KESTREL, OR WINDHOVER.

Falco tinnunculus.

Falco tinnunculus,	*The Kestrel,*	PENN. Brit. Zool. vol. i. p. 244.
” ”	”	MONTAGU, Ornith. Dict.
” ”	”	BEWICK, Brit. Birds, vol. i. p. 39.
” ”	”	FLEM. Brit. An. p. 50.
” ”	”	SELBY, Brit. Ornith. vol. i. p. 47.
” ”	*The Kestril,*	JENYNS, Man. Brit. Vert. p. 84.
” ”	*The Kestrel,*	GOULD, Birds of Europe, pt. v.
” ”	*Faucon Cresserelle,*	TEMM. Man. d'Ornith. vol. i. p. 29.

The Kestrel is one of the most common species of the British *Falconidæ*, and from its peculiar habits, which place it very often in view, it is also, as might be expected, one of the best known. It is handsome in shape, attractive in colour, and graceful in its motions in the air; though from its mode of searching for its food, and the shortness of its wings compared with others of the small raptorial species already figured, it departs from the characters of the true Falcons. It is best known, and that too at any moderate distance, by its habit of sustaining itself in the air in the same place by means of a short but rapid motion of the wings, while its powerful eyes search the surface beneath for mice of different species, which form by far the most considerable part of its food. It has acquired the name of Windhover from this habit of remaining with outspread tail suspended in the air, the head on these occasions always pointing to windward; and it is also called Stonegall, which Mr. Mudie suggests should be written Standgale from the same habit.

Mice, as before stated, certainly form the principal part of the food of this species; and it appears to obtain them by dropping suddenly upon them, and thus taking them by surprise. Montagu says that he never found any feathers in the stomach of the Kestrel; but it is certain that it does occasionally kill and devour small birds. The remains of coleopterous insects, their larvæ, and earth-worms have been found in their stomachs; and Mr. Selby, on the authority of an eye-witness, has recorded the following fact: "I had the pleasure this summer of seeing the Kestrel engaged in an occupation entirely new to me,—hawking after cockchafers late in the evening. I watched him with a glass, and saw him dart through a swarm of the insects, seize one in each claw, and eat them while flying.

He returned to the charge again and again. I ascertained it beyond a doubt, as I afterwards shot him."

In spring the Kestrel frequently takes possession of the nest of a crow or a magpie, in which to deposit its eggs. Sometimes these birds build in high rocks, or on old towers, and among the ruins of buildings, laying four, and occasionally five eggs, about one inch seven lines long, by one inch three lines across, mottled all over with dark reddish brown, and sometimes with blotches of reddish brown upon a pale reddish white ground. The fifth egg has been known to weigh several grains less than either of those previously deposited, and it has also less colouring matter spread over the shell than the others; both effects probably occasioned by the constitutional exhaustion the bird has sustained in her previous efforts. The young are hatched about the end of April or the beginning of May, and are covered for some time with a yellowish white down.

Among the numerous interesting communications on British Birds which have appeared in Mr. Loudon's Magazine of Natural History from the pen of Charles Waterton, Esq., and from his own observations, is one on the habits of the Windhover, in which the value of the mice-destroying propensities of this friend to the agriculturist is clearly pointed out.

The Kestrel is too common in this country to render necessary an enumeration of the counties in which it has been observed. It is well known in Ireland, where it breeds on rocks and in trees. It is common in Scotland, and on its western and northern islands. From the works of northern Naturalists we learn that the Kestrel inhabits Denmark, Norway, Sweden, Lapland, and Siberia; and from thence southward over the continent of Europe generally, to Spain and Italy. Numbers of those bred in Europe are said to pass over in autumn to the north of Africa. It is found in Corfu, and was seen by W. Thompson, Esq. about forty-five miles from Zante; it is found also in Sicily and Malta. Mr. Strickland observed it at Smyrna in winter; and it has been found at Trebizond and at Erzeroom. In North Africa it has been taken at Tangiers and Algiers; it has been found in Egypt and Nubia. It inhabits Central Africa, according to M. Temminck; and the Zoological Society have received specimens from the Cape of Good Hope, which were sent by Captain Spiller.

The range of the Kestrel in the East is also very extensive. Mr. Selby mentions having received specimens from India, and I have seen others from the banks of the Ganges. Colonel Sykes includes it among the birds of the Dukhun. Figures of it occur in drawings from China; it is known to inhabit Japan; and Dr. Horsfield includes it in his catalogue of the birds of Java.

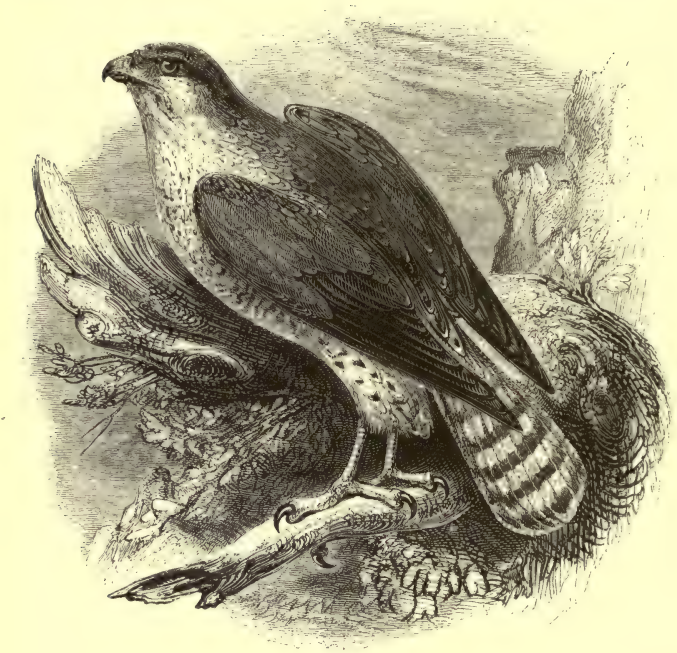
The whole length of the Kestrel is from thirteen to fifteen inches, depending on the sex. The male, the upper figure in the illustration, has the beak blue, pale towards the base; the cere and orbits or eyelids yellow, the irides dark brown; the top of the head, the cheeks, and nape of the neck, ash grey, with dusky longitudinal streaks; the back, tertials, and wing-coverts, reddish fawn colour, with small black triangular spots dispersed over them, one occupying the point of each feather; the primaries and secondaries blackish grey, with lighter-coloured edges; the tail-feathers ash grey, with a broad black band near the end, each feather tipped with white; the breast and belly pale rufous fawn colour, with dark longitudinal streaks on the former, and dark spots on the latter; the thighs and under tail-coverts rufous fawn colour, without spots; under surface of the tail-feathers greyish white, with imperfect dark transverse bars, terminating with the black band and white tips, as on the upper surface; the legs and toes yellow; the claws black.

In the female, the top of the head is reddish fawn colour, striped darker longitudinally; the whole of the back, wings, upper tail-coverts, and tail, reddish brown, barred transversely with bluish black; wing-primaries darker than in the male: the whole under surface of the body of a paler ferruginous colour, but streaked on the breast and spotted lower down, as in the male; under surface of the tail-feathers more uniform in colour and less distinctly barred than in the male.

Young males are like the female till after their first winter, but begin by slow degrees of change in colour to exhibit the plumage which distinguishes the male after having completed their first year.

Mr. John Atkinson of Leeds, in his compendium of the Ornithology of Great Britain, says of the Kestrel, "Our tame specimens, having their wings cut to prevent escape, exhibited great adroitness in climbing the trunk of a tree."

RAPTORES. *FALCONIDÆ.*



THE GOSHAWK.

Astur palumbarius.

Falco	*palumbarius,*	*The Goshawk,*	PENN Brit. Zool. vol. i. p. 225.
"	"	"	MONTAGU, Ornith. Dict.
"	"	"	BEWICK, Brit. Birds, vol i. p. 28.
Buteo	"	"	FLEMING, Brit. An. p. 54.
Astur	"	"	SELBY, Brit. Ornith. vol. i. p. 29.
Accipiter	"	"	JENYNS, Brit. Vert. An. p. 85.
Astur	"	"	GOULD, Birds of Europe, pt. vii.
Falco	"	*L'Autour,*	TEMM. Man. d'Ornith. vol. i. p. 55.

ASTUR. *Generic Characters.*—Bill short, bending from the base ; cutting edge of the upper mandible produced, forming a festoon. Nostrils oval. Wings short, reaching only to the middle of the tail-feathers, the fourth quill-feather the longest, Legs stout, the tarsi covered in front with broad scales. Toes of moderate length, the middle toe the longest, the lateral toes nearly equal.

The Goshawk is at once distinguished from the Falcons by the lobe or festoon, instead of the sharp tooth, on the cutting edge of the upper mandible, and by the short and rounded form of the wing, which reaches only half way down the tail. The Goshawk has also been separated generically from the Sparrow-Hawk on account of its shorter and stronger tarsus, which is covered with feathers on the upper part; and by the want of the elongation in the middle toe, so conspicuous in the genus *Accipiter*, in which genus the Goshawk was formerly arranged.

Inferior in powers to the Falcons, though equal in size to the largest of them, the Goshawk is yet the best of the short-winged Hawks; but its habits, as well as its mode of flying at its game, are very different: it does not stoop to its prey, like the Falcons, but glides along in a line after it, and takes it by a mode which, in the language of falconry, is called *raking.* The Goshawk was formerly in esteem among falconers, and was flown at hares, rabbits, pheasants, grouse, and partridges. It flies fast for a short distance, may be used in an enclosed country, and will even dash through woods after its prey; but if it does not catch the object, it soon gives up the pursuit, and perching on a bough, waits till some new game presents itself. This habit of taking to a branch of a tree and waiting is particularly alluded to by Colonel Thornton, formerly of Thornville Royal, who was devoted to hawking, and who, in reference to the Goshawk, says, "If its game takes refuge, there it waits patiently on a tree, or a stone, until the game, pressed by hunger, is induced to move; and as the Hawk is capable of greater abstinence, it generally succeeds in taking it. I flew a Goshawk," says the colonel, "at a Pheasant; but it got into cover, and we lost the Hawk: at ten o'clock next morning the falconer found her, and just as he had lifted her, the Pheasant ran and rose."

As the flight of the Goshawk is low, and it takes its prey near the ground, the females were flown at hares and rabbits: the males, which are much smaller, were flown at partridges.

The Goshawk is a rare species in the South of England, and the few that are used for hawking are obtained from the Continent. Colonel Thornton, who kept them constantly in Yorkshire, procured some of his specimens from Scotland. Dr. Moore, in his catalogue of the birds of Devonshire, says that it is found occasionally on Dartmoor; but I can find no record of its appearance farther west in England, nor any notice of it in Ireland. A fine adult male was trapped by a gamekeeper in Suffolk in March 1833; and Mr. Doubleday of Epping has sent me word that he received a young bird from Norfolk in the spring of the same year. Mr. Selby mentions that he had never seen a recent specimen south of the Tweed; but states that it is known to breed in the forest of Rothiemurcus, and on the wooded banks of the Dee. Mr. Low says that this species is pretty frequent in Orkney; but as he speaks of it in connexion with sea-beaten rocks without shelter or woods, is there not reason to suspect that Mr. Low was mistaken, and that the birds he saw were Peregrine Falcons,—the more so as several recent visitors to these northern islands have observed Peregrines, but no Goshawks?

Since the publication of the former edition of this work, a Goshawk killed near Dalkeith is noticed by Sir W. Jardine, Bart. as the only Scotch specimen he had seen in a fresh state. Three examples were killed in Northumberland during the winter of 1841, and two specimens in the county of Norfolk since that time.

According to Muller, Linneus, and Pennant, the Goshawk inhabits Denmark, Norway, Sweden, Siberia, Russia, and Chinese Tartary. It is said to be plentiful in Germany, rare in Holland; but according to Vieillot and others it inhabits France, Switzerland, Sicily, Malta, Egypt, and North Africa.

Mr. Hoy, who has frequently visited Germany, has supplied Mr. Hewitson with the following lines, which are here copied from his beautiful work on the eggs of British Birds:—"The Goshawk builds its own nest, and, if undisturbed in its possession, will frequently occupy it for several years, making the necessary repairs. It is placed in some high tree on the outskirts of the forest, and is rarely found in the interior, except in those parts which are open and free from timber. The eggs are three or four, and are frequently hatched by the middle of May."

The eggs of the Goshawk are rare: the few that I have seen were uniform in size and colour, two inches and three sixteenths in length, by one inch eleven sixteenths in breadth, of a pale bluish white without any spots or streaks.

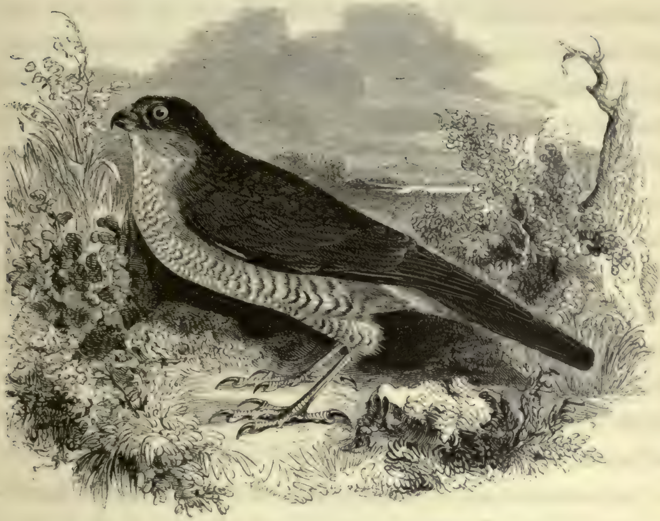
A full-grown female measures from twenty-three to twenty-four inches in length;—the males, one-fourth, and sometimes one-third less; but when adult, the plumage is nearly similar. The beak is horn colour or bluish black; the cere and irides yellow: the top of the head, the whole of the back, upper surface of the wings, and tail-feathers, dark greyish brown,—in females the colour inclines to clove brown; the upper surface of the tail-feathers barred with darker brown: a band passing over the lore, eyes, cheeks and ear-coverts, the nape of the neck, throat, breast, belly and thighs, nearly white, with spots, transverse bars, and undulating lines of dull black; under tail-coverts white;

lore, cheeks, and ear-coverts greyish brown, forming an elongated dark patch on the side of the head; the legs and toes yellow; the claws black.

Young birds have the beak, cere, and eyes nearly similar to those of the old birds; the top of the head, nape, and ear-coverts, ferruginous white, each feather darker in the middle; back, wings, and upper tail-coverts, brown, margined with buff; upper surface of the tail-feathers with five bands of dark brown and four bands of lighter brown, the ends of all the feathers white; wing-primaries dark brown, barred with two shades of brown on the inner webs; the chin, throat, breast, and belly, greyish white, each feather with a central elongated patch of dark brown; thighs and under tail-coverts with a dark brown longitudinal streak, instead of a broad patch; under surface of the wings greyish white, with transverse dusky bars; under surface of the tail-feathers greyish white, with five darker greyish brown transverse bars, the tips of all the feathers white; legs and toes yellow brown; the claws black, those of the inner toe considerably larger than those of the outer.

Bewick, in his excellent work on British Birds, having figured an adult Goshawk, a young bird was chosen for the illustration here given.

RAPTORES. *FALCONIDÆ.*



THE SPARROW-HAWK.

Accipiter nisus.

Falco nisus,	*Sparrow Hawk,*	PENN. Brit. Zool. vol. i. p. 249.
„ „	„	MONTAGU, Ornith. Dict.
„ „	„	BEWICK, Brit. Birds, vol. i. p. 44.
Buteo „	„	FLEM. Brit. An. p. 55.
Accipiter fringillarius,	„	SELBY, Brit. Ornith. vol. i. p. 32.
„ „	„	JENYNS, Brit Vert. p. 85.
„ „	„	GOULD, Birds of Europe, pt. v.
Falco nisus,	*L'Epervier,*	TEMM. Man. d'Ornith. vol. i. p. 56.

ACCIPITER. *Generic Characters.*—Beak bending from the base, short, compressed, superior ridge rounded and narrow, cutting margin of the upper mandible with a distinct festoon. Nostrils oval. Wings short ; the fourth and fifth quill-feathers nearly equal in length, and the longest. Legs long, slender, and smooth. Toes long and slender, the middle toe particularly, the claws curved and sharp.

THE SPARROW-HAWK is another short-winged Hawk, but of small comparative size, in its habits very similar to the Goshawk last described, and has been aptly termed a Goshawk in miniature. It has, however, been separated from the Goshawk generically, on account of the tarsi and toes being long and slender; and the term *Accipiter*, originally bestowed upon it by our countryman and naturalist Ray, has been restored to it. In most of the wooded districts the Sparrow-Hawk is a common and well-known species; bold, active, vigilant and destructive, a dangerous enemy to small quadrupeds and young birds, upon which they subsist, and are so daring during the season in which their own nestlings require to be provided with food, as frequently to venture among the out-buildings of the farmhouse, where they have been observed to fly low, skim over the poultry-yard, snatch up a Chick, and get off with it in an instant.

In reference to the capabilities of this species for hawking, Sir John Sebright says, that he "once took a Partridge with a Sparrow-Hawk of his own breaking, ten days after he had been taken wild from a wood. These Hawks must be kept in high condition, and cannot fly when there is the least wind: they are upon the whole more difficult to manage than strong birds. The flight of the Sparrow-Hawk is rapid for a short distance: he will take Partridges at the beginning of the season, and is the best of all the Hawks for Landrails."

Mr. Selby says, in rearing the young of this species care should be taken to separate them very early; otherwise the female birds, being superior in size and stronger, are sure to destroy and devour the males, as he has repeatedly found, if they are kept caged together.

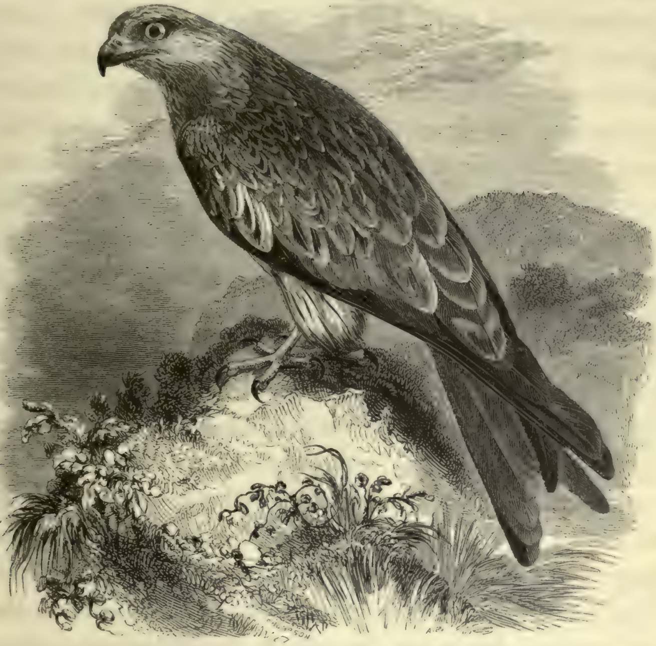
The Sparrow-Hawk generally takes possession of some old or deserted nest in a tree, most frequently that of the Crow, in which the female deposits four or five eggs, each about one inch seven lines long, by one inch four lines broad, of a pale bluish white, blotched and spotted with dark red brown. The young are covered with a delicate and pure white down, and are abundantly supplied with food. Mr. Selby mentions having found a nest of five young Sparrow-Hawks which contained besides, a Lapwing, two Blackbirds, one Thrush, and two Green Linnets, recently killed, and partly divested of their feathers.

The Sparrow-Hawk is common in most of the counties of England, and has been observed in the west and north of Ireland; it occurs also in Scotland and its northern islands. It inhabits Denmark, Sweden, Norway, Russia, and from thence southward, over the European continent to Spain and Italy. It is found in Sicily, Malta, Algeria, and Egypt. Mr. Strickland observed it at Smyrna; and the Zoological Society has received specimens from Erzeroom. It is found in Thibet, Cashmere, North Western India, and Bengal; and Mr. Temminck has recorded it as occurring as far to the eastward as Japan.

The adult male measures about twelve inches in length; the beak blue, lightest at the base; the cere greenish yellow, the irides yellow; the top of the head, nape of the neck, back, wings, and wing-coverts, rich dark brown, —in very old males with a tinge of bluish grey; feathers of the tail greyish brown, with three conspicuous transverse bands of dark brown; the chin, cheeks, throat, breast, belly, thighs, and under tail-coverts, rufous, with numerous transverse bars of darker rufous brown; legs and toes long, slender, and yellow; the claws curved, sharp, and black.

The female is generally three inches longer than the male; the beak, bluish horn colour; cere yellowish, the irides yellow; the top of the head, upper part of the neck, back, wing, and tail-coverts, brown,—the base of many of the feathers white, which extending beyond the edge of the feather immediately above it, causes a white spot or mark; primaries and tail-feathers light brown, barred transversely with darker brown; under surface of the neck, body, wing-coverts, and thighs, greyish white, barred transversely with brown; under surface of the wing and tail feathers of the same colour, but the light and dark bars much broader; the first six wing-primaries emarginated; the fourth and fifth quill-feathers equal and the longest, the first quill-feather the shortest; the legs and toes yellow; the claws long, curved, sharp, and black.

The young male Sparrow-Hawk resembles the female; but the brown feathers of the back and the wing-coverts are edged with reddish brown; feathers of the tail reddish brown, particularly toward the base, with three conspicuous dark brown transverse bands. In other particulars like the female; and both have a collar formed by a mixture of white and brown, which extends from the sides of the neck to the nape.



THE KITE.

THE FORK-TAILED KITE, AND GLEAD.

Milvus vulgaris.

Falco milvus,	*The Kite,*	PENN. Brit. Zool. vol. i, p. 229.
„ „	„	MONTAGU, Ornith. Dict.
„ „	„	BEWICK, Brit. Birds, vol. i. p. 32.
Milvus vulgaris,	„	FLEM. Brit. An. p. 51.
„ „	„	SELBY, Brit. Ornith. vol. i. p. 74.
„ *Ictinus,*	„	JENYNS, Brit. An. p. 86.
„ *vulgaris,*	„	GOULD, Birds of Europe, pt. x.
Falco milvus,	*Milan Royal,*	TEMM. Man. d'Ornith. vol. i. p. 59.

MILVUS. *Generic Characters.*—Beak straight at the base, curved from the cere to the point, cutting margin with a slight festoon. Nostrils oval, oblique. Wings long; the fourth quill-feather the longest; the first and seventh quill-feathers nearly equal in length. Tail long, forked. Legs short. Toes short and strong, the outer toe united at its base with the middle toe. Claws moderately long and curved.

The Kite is readily distinguished among the British *Falconidæ*, even when at a distance on the wing, by its long and forked tail. The flight of this large bird is singularly graceful and easy, gliding smoothly along with little muscular exertion. It still retains in some districts the name of Gled, or Glead,—derived, according to Pennant, from the saxon *glida*. Occasionally it sails in circles, with its rudder-like tail by its inclination governing the curve; then stops, and remains stationary for a time, the tail expanded widely, and with its long wings sustaining its light body, apparently from the extent of surface the bird is able to cover. In its mode of taking its prey the Kite is distinguished from Falcons and Hawks generally, by pouncing upon it upon the ground. The nature of the food also makes this habit evident; twenty-two moles were found in the nest of a Kite, besides frogs and unfledged birds: it preys also on leverets, rabbits, snakes, and particularly on the young of various Gallinaceous birds. The Kite, like the Sparrow-Hawk, frequently visits the poultry-yard, but is not remarkable for its courage: Hens have been known by their vociferations and their show of resistance to protect their Chickens from the threatened attack, and even to drive away the unwelcome intruder.

A writer in the Magazine of Natural History relates that he had almost daily opportunities of witnessing the powers of the Kite in taking fish from a broad river near which he resided; and though distance prevented him from distinguishing the particular sort of fish, the birds were eminently successful, occasionally alighting on the banks to eat their captures, at other times bearing them off to the woods.

In Hertfordshire and Essex the Kite is called the Puttock, and the Crotchet-tailed Puddock. Merrett, in his

Pinax, and Shakspeare, in the Second Part of Henry the Sixth, identify the term Puttock with the Kite:

> "Who finds the Partridge in the *Puttock's* nest,
> But may imagine how the bird was dead,
> Altho' the *Kite* soar with unblooded beak."

But in some counties the Common Buzzard is also called a Puttock. In Ireland, as I learn from Mr. Thompson of Belfast, the Kite is unknown to Ornithologists as an indigenous bird; but gamekeepers and others call the Common Buzzard a Kite.

In France, as already mentioned at page 40, the falconers of Louis the Sixteenth trained powerful Falcons, called Lanners, obtained from the eastern parts of Europe, to fly at Kites for the gratification of the king; and by some of the Naturalists of the Continent the Kite is still called *Milan Royal* and *Milvus regalis*, from the amusement afforded by these birds to the royal parties.

Sir John Sebright observes, that "the Fork-tailed Kites were much flown some years ago by the Earl of Orford, in the neighbourhood of Alconbury Hill. A great Owl, to the leg of which the falconers usually tie a fox's brush, not only to impede its flight, but to make it, as they fancy, more attractive, is thrown up to draw down the Kite." The Owl is trained to fly round in small circles, and to return when lured, and having performed his part of decoy-bird, and the Kite thus enticed within the required distance then becomes the quarry. A cast of Hawks are sent in pursuit, the capture and death of the Kite being the real object intended.

In proof of the docility of this species, Mr. Thompson of Belfast relates that "Mr. R. Langtry, when at Loch Awe, in Argyleshire, early in the summer of 1833, procured from the nest two young Kites, which proved a highly interesting addition to his aviary. They at once became very tame and familiar, and were so gentle in disposition as to be most engaging. Every morning they had their liberty, never flew far, but soared to a great height in the air, and, in 'still repeated circles,' displayed their peculiar and graceful flight. To either lure or fist they always returned when called. Mice were preferred by them to birds or any other food. When these Kites were on wing, rats let off from the cage-trap were expertly caught by them."—*Magazine of Zoology and Botany*, vol. ii. p. 172.

This bird has now become comparatively rare in England; extensive forests or well-wooded districts afforded it the only chance of escape from the increasing desire to preserve game, and the consequent war of extermination carried on by gamekeepers against birds of prey generally.

The nest, formed of sticks and lined with various soft materials, is usually placed in the forked branch of a tree in a thick wood. Two, and sometimes three eggs, of a short oval form, measuring two inches two lines in length by one inch nine lines in breadth, of a soiled white colour, marked with a few reddish brown spots over the larger end, are laid early in the season. The nest and its contents are sometimes vigorously defended: a boy who climbed up to one had a hole pecked through his hat, and one hand severely wounded, before he could drive away the parent bird.

In the southern counties of England the Kite is rare: Montagu saw but one in Devonshire in twelve years. Dr. Moore considers it rare still, but records two or three captures; and Mr. Couch mentions two instances of its appearance in Cornwall. The woods about Alconbury

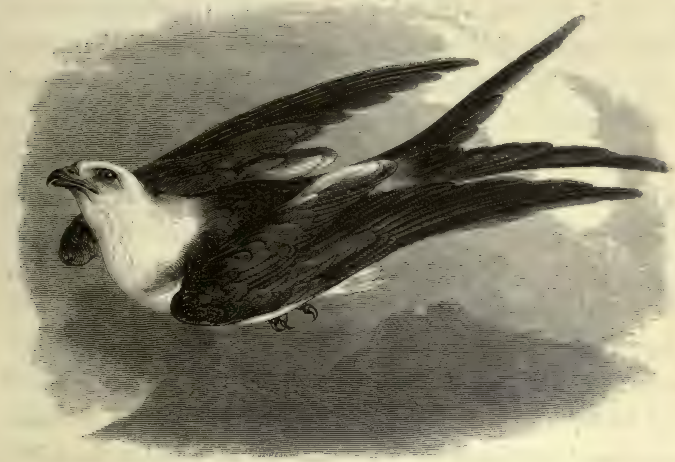
Hill are even now the breeding-places of the Kite. Mr. Waterton has noticed this bird and its habits in Yorkshire; and Mr. Selby states that though rare in Northumberland and Durham, it is more frequent in Westmoreland and Cumberland. Dr. Heysham, in reference to the last-named county, says that the Kite breeds in the woods near Armathwaite, and also in those near Ullswater.

The Kite is not uncommon in Denmark, Sweden, and Norway, from spring till autumn; but during the winter very few remain there. It inhabits Russia, Siberia, and the country about Lake Baikal. In the southern part of Europe, though rare in Holland, it inhabits the forests of Germany, France, and Italy. It has been observed at Corfu, Sicily, Crete, Malta, Algeria, and Egypt.

The specimen from which the figure and the following description were taken measured twenty-six inches in length. The beak is horn colour, cere and irides yellow; the feathers of the head and neck greyish white, streaked along the shaft with ash brown; the feathers of the back and wing-coverts dark brown in the centre, broadly edged with rufous; the inner web of some of the tertials edged with white: the primaries nearly black: upper tail-coverts rufous; tail-feathers reddish brown, the outer webs of one uniform colour, the inner webs barred with dark brown; the outer tail-feather on each side the darkest in colour; the tail deeply forked: the chin and throat, like the top of the head, greyish white, streaked with dusky; the breast, belly, and thighs, rufous brown, each feather with a central longitudinal streak of dark brown: the under surface of the wings, near the body, rufous, with dark brown feathers edged with red brown towards the outer part of the wing; under tail-coverts plain rufous white; under surface of the tail-feathers greyish white, with the dark bars of the upper surface showing through: the tarsi and toes yellow; the claws black.

The females of this species are rather larger than the males; but there is no very observable difference in the plumage: females have the head more inclined to grey, with a more decided red colour on the under surface of the body.

RAPTORES. *FALCONIDÆ.*



THE SWALLOW-TAILED KITE.

Nauclerus furcatus.

Elanus	*furcatus,*	*Swallow-tailed*	*Kite,*	FLEM. Brit. An. p. 52.
,,	,,	,,	*Elanus,*	SELBY, Brit. Ornith. vol. i. p. 77.
Milvus	,,	,,	*Kite,*	JENYNS, Brit. Vert. p. 86.
Nauclerus,	,,	,,	,,	GOULD, Birds of Europe, pt xxii.

NAUCLERUS. *Generic Characters* —" Bill small, weak, considerably hooked, with a small and nearly obsolete festoon in the middle. Orbits and sides of the head thinly provided with feathers. Wings very long ; the first and second quill internally emarginate towards the tip. Tail very long and deeply forked. Tarsi very short, not longer than the hind toe and claw ; plumed half way in front, the remaining portion covered with angulated scales. Toes short ; the two lateral almost equal, the hinder nearly equal to the inner. Claws grooved beneath."

Two Specimens of this elegant bird having been taken in this country, it is entitled to a place in this work ; and I have followed Mr. Vigors,* Mr. Swainson,† and Mr.

---

* Zoological Journal, vol. ii. p. 386.

† Natural History and Classification of Birds, vol. ii. p. 210.

Gould,* in considering that it required to be distinguished generically from the species belonging to the genera Milvus and Elanus, with which it was previously associated. I have also availed myself of the detailed generic characters published by Mr. Swainson in his Natural History and Classification of Birds, volume ii. p. 210.

The first of these two examples of the Swallow-tailed Kite just referred to as having been taken in Britain was killed at Balachoalist, in Argyleshire, in 1772, and, according to Dr. Fleming, was recorded by the late Dr. Walker in his *Adversaria* for 1772, page 87, and for 1774, page 153. The occurrence of the second example is thus recorded in the fourteenth volume of the Transactions of the Linnean Society, page 583:—"Dr. Sims, F.L.S. communicated to the Society an extract of a letter from W. Fothergill, Esq. of Carr-end, near Arkrigg, in Yorkshire, containing a notice of the *Falco furcatus* Linn. having been taken alive in Shaw-gill, near Hawes, in Wensleydale, in that county, on the 6th of September 1805. Mr. Fothergill states, that, apparently to avoid the violence of a tremendous thunderstorm, and the clamorous persecution of a flock of Rooks which attacked it at the same instant, it took shelter in a thicket, where it was seized before it could extricate itself. The person who caught it kept it a month; but a door being accidentally left open, it made its escape. It first alighted on a tree at no great distance, from which it soon ascended in a spiral flight to a great elevation, and then went steadily off in a southerly direction as far as the eye could trace it.

The Swallow-tailed Kite, the *Falco furcatus* of Linneus, is only an occasional visitor to this country: it is a native of the southern states of North America, where it remains during summer, but is observed in autumn going farther south to pass the winter. According to Vieillot, it visits Peru and Buenos Ayres.

---

* Birds of Europe, pt. xxii.

The habits of this bird have been detailed from personal observation by the American Ornithologists, Messrs. Wilson, Audubon, and Nuttall: and to Mr. Audubon's Biography I am indebted for the following particulars of the geographical distribution and habits of this bird.

"A solitary individual of this species has once or twice been seen in Pennsylvania. Farther to the eastward the Swallow-tailed Hawk has never, I believe, been observed. Travelling southward, along the Atlantic coast, we find it in Virginia, although in very small numbers. Beyond that State it becomes more abundant. Near the falls of the Ohio a pair had a nest and reared four young ones in 1820. In the lower parts of Kentucky it begins to become numerous; but in the States farther to the south, and particularly in parts near the sea, it is abundant. In the large prairies of the Attacapas and Oppellousas, it is extremely common."

"In the States of Louisiana and Mississippi, where these birds are abundant, they arrive in large companies in the beginning of April, and are heard uttering a sharp plaintive note. At this period I generally remarked that they came from the westward, and have counted upwards of a hundred in the space of an hour, passing over me in a direct easterly course. At that season, and in the beginning of September, when they all retire from the United States, they are easily approached when they have alighted, being then apparently fatigued, and busily engaged in preparing themselves for continuing their journey, by dressing and oiling their feathers. At all other times, however, it is extremely difficult to get near them, as they are generally on wing through the day, and at night rest on the higher pines and cypresses, bordering the river-bluffs, the lakes, or the swamps of that district of country."

"They always feed on the wing. In calm and warm weather they soar to an immense height, pursuing the large insects called *musquito hawks*, and performing the most singular evolutions that can be conceived, using their tail with an elegance of motion peculiar to themselves. Their principal food, however, is large grasshoppers, grass-caterpillars, small snakes, lizards, and frogs. They sweep close over the fields, sometimes seeming to alight for a moment to secure a snake, and holding it fast by the neck, carry it off, and devour it in the air. When searching for grasshoppers and caterpillars, it is not difficult to approach them under cover of a fence or tree. When one is then killed and falls to the ground, the whole flock comes over the dead bird, as if intent upon carrying it off. An excellent opportunity is thus afforded of shooting as many as may be wanted, and I have killed several of these Hawks in this manner, firing as fast as I could load my gun." *

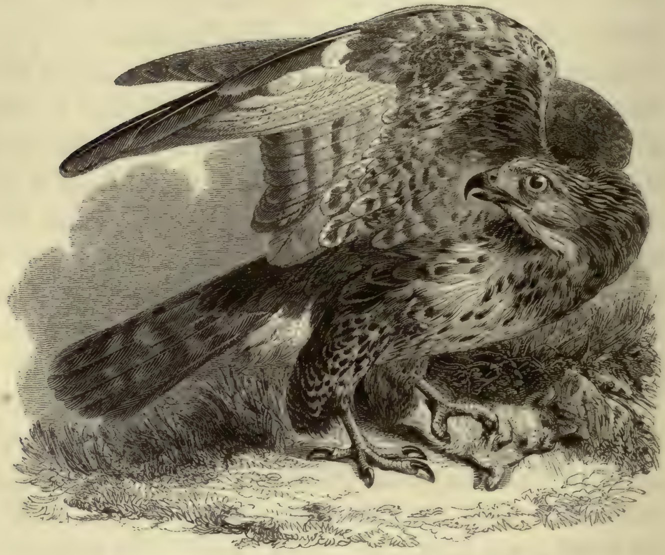
"The Swallow-tailed Hawk pairs immediately after its arrival in the southern states ; and as its courtships take place on the wing, its motions are then more beautiful than ever. The nest is usually placed on the top branches of the tallest oak or pine tree, situated on the margin of a stream or pond. It resembles that of a Carrion Crow externally, being formed of dry sticks, intermixed with Spanish moss, and is lined with coarse grasses and a few feathers. The eggs are from four to six, of a greenish white colour, with a few irregular blotches of dark brown at the larger end. The male and the female sit alternately, the one feeding the other.—The young are at first covered with buff-coloured down. Their next covering exhibits the pure white and black of the old birds, but without any of the glossy purplish tints of the latter. The tail, which at first is but slightly forked, becomes more so in a few weeks, and at the approach of autumn exhibits little difference from that of the adult birds. The plumage is completed the first spring. Only one brood is raised in the season.—The species leaves the United States in the beginning of September, moving off in flocks, which are formed immediately after the breeding season is over."

---

* Mr. Nuttall says, that the Swallow-tailed Kites seize upon the nests of locusts and wasps, and, like the Honey-Buzzard, devour both the insects and their larvæ.

The figure and description here given were taken from a preserved specimen in the Museum of the Zoological Society, the whole length of which was twenty inches; the beak bluish black, the cere lighter blue, the irides dark; the whole of the head, neck, breast, belly, under surface of the wings, sides of the body, thighs, and under tail-coverts, pure white; the back, wing-primaries, secondaries, upper tail-coverts, and tail-feathers, black, with a purplish metallic lustre; the tertials black on the outer webs, but patched with pure white on the inner; tail very deeply forked; legs and toes greenish blue; claws faded orange colour.

RAPTORES. *FALCONIDÆ.*



THE COMMON BUZZARD.

Buteo vulgaris.

Falco buteo,	*The Buzzard,*	Penn. Brit. Zool. vol. i. p. 232.
" "	*Common Buzzard,*	Montagu, Ornith. Dict.
" "	*The Buzzard,*	Bewick, Brit. Birds, vol. i. p. 22.
Buteo vulgaris,	*Common Buzzard,*	Flem. Brit. An. p. 54.
" "	"	Selby, Brit. Ornith. vol. i. p. 55.
" "	"	Jenyns, Brit. Vert. p. 87.
" "	"	Gould, Birds of Europe, pt. ix.
Falco buteo,	*La Buse,*	Temm. Man. d'Ornith. vol. i. p. 63.

Buteo. *Generic Characters.*—Bill rather small and weak, bending from the base, part of the cutting edge of the upper mandible slightly projecting ; cere large ; nostrils oval. Wings ample ; the first quill-feather short, about equal in length to the seventh, the fourth the longest ; the first four feathers with the inner webs deeply notched. Tarsi short, strong, scaled or feathered. Toes short ; claws strong.

The Buzzard is one of the most common of the larger kind of Hawks which inhabit the wooded districts of this country, preying upon small quadrupeds, birds, and even reptiles. Bulky in appearance and rather slow in flight, it remains for hours watching from the same tree, appearing to prefer the accidental approach of an animal that may serve for a meal rather than find it by a laborious search, and is seldom observed to remain long together upon the wing. Its courage too, as compared with others of the *Falconidæ*, has been questioned; since it is known to attack such animals as are either young or defenceless, which it does not pursue and capture by its powers of flight, but pounces at upon the ground. Though occasionally seen soaring in the air in circles, it is much more frequently stationed on a tree, from which if approached it bustles out, as observed by the author of the Journal of a Naturalist, with a confused and hurried flight, indicative of fear.

Mr. Macgillivray, in his descriptions of the Rapacious Birds of Great Britain, gives the Buzzard a character for greater activity in Scotland, as observed by himself; but the nature of the country may be the cause of this difference in habit, and much greater exertion is perhaps absolutely necessary to ensure a sufficient supply of food. In Scotland the Buzzard "forms its nest on rocks, or on the edges of steep scars or beds of torrents:" one nest described by the writer last named "was placed on the top of a steep bank or rut of a stream, and was composed of twigs, heath, wool, and some other substances." In England the Buzzard usually builds, or takes to, a nest in the forked branches of a tree in a large wood: the materials with which the nest is made, or repaired, are similar to those that have been already named.

The female lays two or three, and sometimes four eggs, of a short oval form, two inches three lines in length by one inch and ten lines in breadth, of a soiled white colour, slightly spotted with pale brown. Both parent birds attend upon and feed their young with great assiduity ; and Ray, in his letters, as recorded by Pennant, says, that the male Buzzard will hatch and bring up the offspring if the hen is killed. The young accompany the old ones for some little time after they quit the nest ; and White of Selborne adds, that they follow their dam with a piping and wailing noise. In confinement, says Mr. Atkinson, our Buzzards are observed to hide their food when satisfied, like the Magpie.

The extreme partiality of the Common Buzzard to the seasonal task of incubation and rearing young birds has been exemplified in various instances. A few years back, a female Buzzard, kept in the garden of the Chequers Inn at Uxbridge, showed an inclination to sit by collecting and bending all the loose sticks she could obtain possession of. Her owner, noticing her actions, supplied her with materials; she completed her nest, and sat on two hen's eggs which she hatched, and afterwards reared the young. Since then, she has hatched and brought up a brood of chickens every year. She indicates her desire to sit by scratching holes in the ground, and breaking and tearing everything within her reach. One summer in order to save her the fatigue of sitting, some young Chickens just hatched were put down to her ; but she destroyed the whole. Her family in June 1831 consisted of nine ; the original number were ten, but one had been lost. When flesh was given to her, she was very assiduous in tearing and offering it as food to her nurslings, and appeared uneasy if, after taking small portions from her, they turned away to pick up grain. Several other similar instances are recorded.

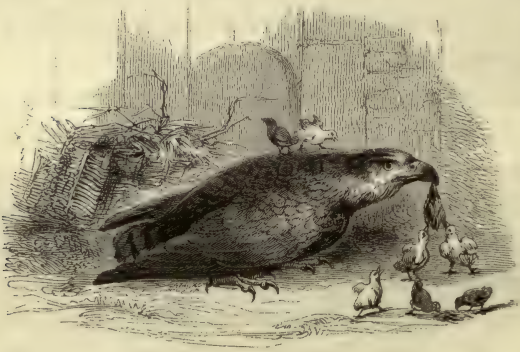
Though more rare now than formerly, an enumeration of county localities for a bird so well known will probably be considered unnecessary. According to Mr. Thompson, as stated in his contributions to the Natural History of Ireland, now in course of publication in the Magazine of Zoology and Botany, this species is of common occurrence in several parts of Ireland. In Scotland the Buzzard is not very plentiful, nor is it included either by the Rev. Mr. Low or Mr. Dunn in their accounts of the Birds of Orkney and Shetland; yet it inhabits Denmark, Norway, Sweden, and Russia. It is well known over the wooded parts of the continent of Europe south of Russia, and is abundant in Holland, where, according to M. Temminck, it makes its appearance in autumn and remains till the spring. It inhabits Spain, Portugal, and Italy, and passes over the Mediterranean to North Africa; but Madeira, Sicily, Crete, Smyrna and Trebizond, appear to be the southern and eastern limits of the range of the Common Buzzard.

In North America Dr. Richardson observed the Common Buzzard as high as the 57th parallel of latitude, and considered that it went still farther north. This bird visits the fur-countries in the middle of April, and leaves by the end of September.

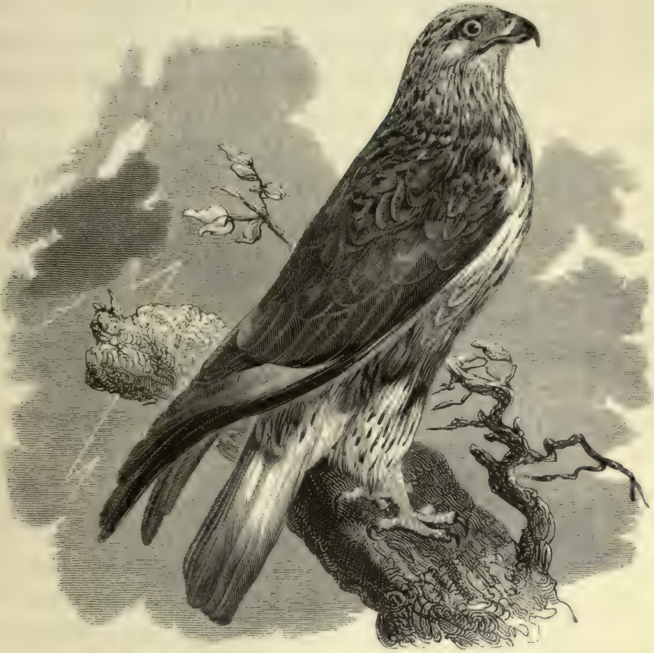
The whole length of the Common Buzzard is from twenty to twenty-two inches, depending on the sex,—the females, as in the *Falconidæ* generally, being the largest. From the habit of seeking food late in the evening observed in this species, and also in the Rough-legged Buzzard next to be described—in the softer and more downy texture of the feathers as compared with the plumage of the true Falcons, the Buzzards are considered as indicating an approach to the Owls.

The beak is bluish black, darkest in colour towards the point; the cere yellow, the irides generally yellow: but as the Common Buzzard, and indeed all the Buzzards, are subject to considerable variation in the colour of their plumage, the irides are observed to vary also, presenting some reference to the prevailing tone of the colour of the feathers. The upper part of the head, occiput, and cheeks, pale brown, streaked longitudinally with darker brown; the whole of the back, wing-coverts, upper tail-coverts, and upper surface of the tail-feathers, dark clove brown, the latter barred with lighter brown, the feathers of the former named parts having lighter-coloured edges; the wing-primaries brownish black; the chin and throat almost white; front of the neck, breast, under wing-coverts, belly, and thighs, greyish white, spotted and streaked with brocoli brown; under tail-coverts white; under surface of the tail-feathers greyish white, barred transversely with dark wood brown; legs and toes yellow; the claws black.

The vignette below, is from a sketch of the Buzzard, taken in the garden referred to at page 84.



RAPTORES. *FALCONIDÆ.*



THE ROUGH-LEGGED BUZZARD.

Buteo lagopus.

Falco	*lagopus,*	*Rough-legged*	*Falcon,*	PENN. Brit. Zool. vol. i. p. 228.
„	„	„	„	MONT. Ornith. Dict.
„	„	„	„	BEWICK, Brit. Birds, vol. i. p. 20.
Buteo	„	„	*Buzzard,*	FLEM, Brit. An. p. 54.
„	„	„	„	SELBY, Brit. Ornith. vol. i. p. 58.
„	„	„	„	JENYNS, Brit. Vert. p. 87.
„	„	„	„	GOULD, Birds of Europe, pt. xviii.
Falco	„	*Buse Pattue,*		TEMM. Man. d'Ornith. vol. i. p. 65.

THE ROUGH-LEGGED BUZZARD is at once distinguished from the Common Buzzard last described, by having the tarsi covered with feathers as low down as the junction of the toes. In its habits and powers, however, it resembles the Common Buzzard; and, like that bird, it occasionally exhibits some deviation in the colour of the plumage from that which may be considered characteristic of the species. The Rough-legged Buzzard is much the more rare bird of the two; and although it has now been killed once or oftener in almost every county in England, it has rarely been known to breed here, and is usually obtained in the spring or autumn, when changing its latitude from south to north, or *vice versâ*.

The Rough-legged Buzzard appears from various authorities to prefer marshy districts; and Mr. Selby has recorded his own personal observation of the habits of two birds of this species. "Their flight was smooth, but slow, and not unlike that of the Common Buzzard; and they seldom continued for any length of time on the wing." They preyed upon rabbits, mice, wild ducks, other birds, and some reptiles, as lizards and frogs.

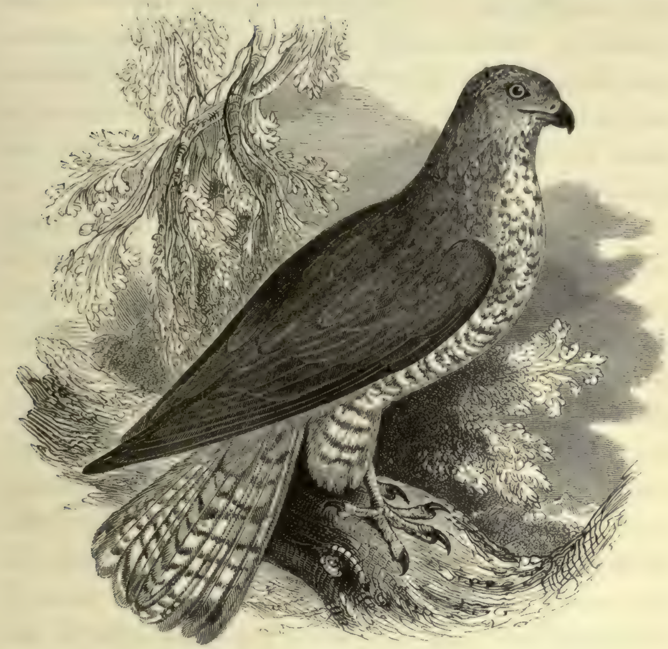
Mr. Williamson, in his remarks on the appearance of rare birds in the vicinity of Scarborough, says that "the Rough-legged Buzzard breeds occasionally in a precipitous dell near Hackness. A marked female returned the following year with a new mate to her former favourite haunt."

According to M. Temminck, this bird generally builds on high trees, and lays three or four eggs. A coloured figure of the egg will be found in the first part of Dr. Thieneman's work on the Eggs of the Birds of Europe, tab. iii. fig. 2: this representation is two inches two lines in length, by one inch eight lines in breadth, of a pale brownish white, blotched over the larger end with darker brown. Mr. Thompson of Belfast, in his contribution to the Natural History of Ireland, published in the Magazine of Zoology and Botany, mentions three or four instances of the occurrence of the Rough-legged Buzzard in that country; and Sir William Jardine mentions several that have been killed in East Lothian and other southern districts of Scotland.

This species appears to inhabit Scandinavia, Lapland, Russia, and from thence southward is distribruted over the European continent to the shores and islands of the Mediterranean. It has been taken at Madeira. Le Vaillant found it in considerable numbers frequenting the wooded portions of the district of Auteniquoi in Africa; and Dr. Andrew Smith has recorded its occurrence as far south as the Cape of Good Hope.

The Rough-legged Buzzard is well known in the United States. Mr. Audubon has seen it as far south as the eastern portion of North Carolina, from whence, he says, it goes northward to breed in March; observing also that it is more nocturnal in its habits than any other Hawk in the same locality. Dr. Richardson, in his Zoology of North America, says this species advances, east of the Rocky Mountains, as high as the 68th parallel. "It arrives in the fur countries in April or May, and having reared its young, retires southward early in October. It winters on the banks of the Delaware and Schuylkill, returning to the north again in the spring. It is by no means an uncommon bird in the districts through which the expedition (under Sir John Franklin) travelled; but being very shy, only one specimen was procured. A pair were seen at their nests built of sticks, on a lofty tree, standing on a low moist alluvial point of land. They sailed round the spot in a wide circle, occasionally settling on the top of a tree, but were too wary to allow us to come within gun-shot. In the softness and fulness of its plumage, its feathered legs, and habits, this bird bears some resemblance to the Owls. It flies slowly, sits for a long time on the bough of a tree, watching for mice, frogs, &c., and is often seen skimming over swampy pieces of ground, and hunting for its prey by the subdued daylight, which illuminates even the midnight hours in high parallels of latitude. Wilson observes, that in Pennsylvania it is in the habit of coursing over the meadows long after the sun has set. It is fitted for this nocturnal chase by the softness of its plumage, which contributes to render its flight noiseless, like that of an Owl."

The whole length of the specimen figured was twenty-four inches; the beak black; the cere and irides yellow; the top of the head, the cheeks, nape, and upper part of the neck, pale buff, each feather streaked or patched in the centre with dark brown; the back, wings, wing-coverts, and rump, clove brown, some of the feathers edged with fawn colour; primaries brownish black, the fourth the longest, the first and seventh equal in length; upper tail-coverts buffy white, with an angular brown patch near the end of each feather; upper surface of the tail-feathers buffy white on the proximal half of their length, the distal half brown. The chin, throat, and breast, fawn colour, tinged with ferruginous, streaked and patched with brown; the belly almost uniform clove brown; thighs and tarsi to the junction of the toes covered with feathers of fawn colour spotted with brown: the toes with three broad scales at the base of the claw, yellow; the claws or nails black: under surface of the wing-primaries to the end of the broad part of the inner web white, from the emargination brownish black: under tail-coverts uniform buffy white; proximal half of the under urfaces of the tail-feathers white, the distal half greyish brown.



THE HONEY BUZZARD.

Pernis apivorus.

Falco	*apivorus,*	*Honey*	*Buzzard,*	Penn. Brit. Zool. vol. i. p. 235.
„	„	„	„	Mont. Ornith. Dict.
„	„	„	„	Bewick, Brit. Birds, vol. i. p. 24.
Pernis	„	„	„	Flem. Brit. An. p. 52.
„	„	„	„	Selby, Brit. Ornith. vol. i. p. 62.
Buteo	„	„	„	Jenyns, Brit. Vert. p. 88.
Pernis	„	„	„	Gould, Birds of Europe, pt. xvi.
Falco	„	*Buse Bondrée,*		Temm. Man. d'Ornith. vol. i. p. 67.

Pernis. *Generic Characters.*—Bill slender, rather weak, curved from the base, the cutting edge of the upper mandible nearly straight ; the cere large ; nostrils elongated, placed obliquely ; the lore covered with small scale-like feathers. Wings long and large ; the first quill-feather short ; the third and fourth feathers the longest in the wing ; inner webs of the first four deeply notched. Tail long. Tarsi short, half-plumed, the rest reticulated ; toes of moderate length and strength ; the claws only slightly curved.

The genus Pernis was proposed by Baron Cuvier for the Honey Buzzard of Europe, to separate and distinguish it from the true Buzzards, on account of its less powerful beak,—the lore, or space between the beak and the eye, being defended by scale-like feathers,—and the manner in which the legs were plumed, or otherwise covered and protected.

The Honey Buzzard is a rare species in this country, more frequently met with from spring to autumn,—which, coupled with the circumstance of its food, when ascertained, being almost entirely composed of insects, has led to the supposition that this bird is only a summer visitor. Mr. Vieillot says of this species, which is not common in France, that it seldom flies except from one tree to another, or from bush to bush, and then always low, and that it runs when on the ground with great rapidity, like our common fowls,—a circumstance which is also noticed by Willughby. Several specimens taken in Northumberland have come under the examination of Mr. Selby of Twizel House; and some interesting observations in reference to the habits of the Honey Buzzard are contained in the annual address of Sir William Jardine, Bart. to the Members of the Berwickshire Naturalists' Club in September 1836.

"The district around Twizel appears to have something attractive to this species, for within these few years several specimens have been procured both in the adult and immature plumage. The bird in question was accidentally observed to rise from the situation of a wasp's nest, which it had been attempting to excavate, or, in fact, to a certain extent had accomplished; and the large hole which had been scraped showed that a much greater power could be employed, and that the bird possessed organs much better fitted to remove the obstacles which generally concealed its prey, than a superficial examination of the feet and legs would warrant us in ascribing to it. A few hours afterwards, the task was found to be entirely completed, the comb torn out and cleared from the immature young; and after dissection proved that at this season (autumn), at least, birds or mammalia formed no part of the food. A steel trap, baited with the comb, secured the aggressor in the course of the next day, when he had returned to review the scene of his previous havoc."

The stomach of a specimen killed in the north of Ireland, and examined by Mr. Thompson of Belfast, "contained a few of the larvæ and some fragments of perfect coleopterous insects; several whitish coloured hairy caterpillars; the pupæ of a species of butterfly, and also of the six-spot burnet moth." The stomach of one examined by White of Selborne contained some limbs of frogs, and many grey snails without shells.

Examinations have usually proved the food to have been the larvæ of bees and wasps, to obtain which the receptacles containing them are scratched out and broken up in the manner described by Sir William Jardine. In one instance, in the case of a Honey Buzzard kept in confinement, I was told that it killed and ate rats, as well as birds of considerable size, with great ease and good appetite. Buffon says, that in winter, when fat, the Honey Buzzard is good eating.

This species builds or takes to a nest on a high tree in a wood or forest. White, in his Natural History of Selborne, says, that "a pair of Honey Buzzards built them a large shallow nest, composed of twigs, and lined with dead beechen leaves, upon a tall slender beech near the middle of Selborne Hanger, in the summer of 1780. In the middle of the month of June, a bold boy climbed this tree, though standing on so steep and dizzy a situation, and brought down an egg, the only one in the nest, which had been sat on for some time and contained the embryo of a young bird. The egg was smaller, and not so round as those of the Common Buzzard; was dotted at each end with small red spots, and surrounded in the middle with a broad blood-red zone." Pennant mentions an instance of a Honey Buzzard that was shot on her nest, which contained two eggs blotched over with two shades of red, something darker than those of the Kestrel. The eggs of the Honey Buzzard are rare: I have only seen three or four specimens, one of which answered to the description given by White, the colouring matter being confined to a broad band round the middle. One specimen in my collection resembles those mentioned by Pennant, being mottled nearly all over with two shades of orange brown: long diameter, two inches one line; transverse diameter, one inch nine lines. Willughby says, the Honey Buzzard builds its nest of small twigs, lining it with wool, and adds, "We saw one that made use of an old Kite's nest to breed in, and that fed its young with the nymphæ of wasps; for in the nest we found the combs of wasp's nests, and in the stomach of the young the limbs and fragments of wasp-maggots. There were in the nest but two young ones, covered with a white down, spotted with black. Their feet were of a pale yellow; their bills between the nostrils and the head, white; their craws large,—in which were lizards, frogs, &c. In the crop of one of them we found two lizards entire, with their heads lying towards the bird's mouth, as if they sought to creep out."

J. P. Wilmot, Esq. has supplied an interesting communication in the Zoologist, vol. ii. page 237, on the breeding of the Honey Buzzard in various recent instances. Early in the month of July, 1838, a female Honey Buzzard was shot off her nest in Wellgrove wood, in the parish of Bix, near Henley-on-Thames, by Lord Camoy's gamekeeper. Two eggs were taken from the nest, and the male bird which continued to haunt the wood was also shot. The nest, a very large one, was placed in the fork of a beech tree, and was built of sticks of considerable size, with which were intermixed twigs with the leaves on. The lining was composed of leaves and wool.

Other instances are mentioned as occurring in Warwickshire in the season of 1841. The old birds were obtained: one was shot, the other was caught in a trap baited with young rabits. They had been seen to carry off young pheasants in their claws.

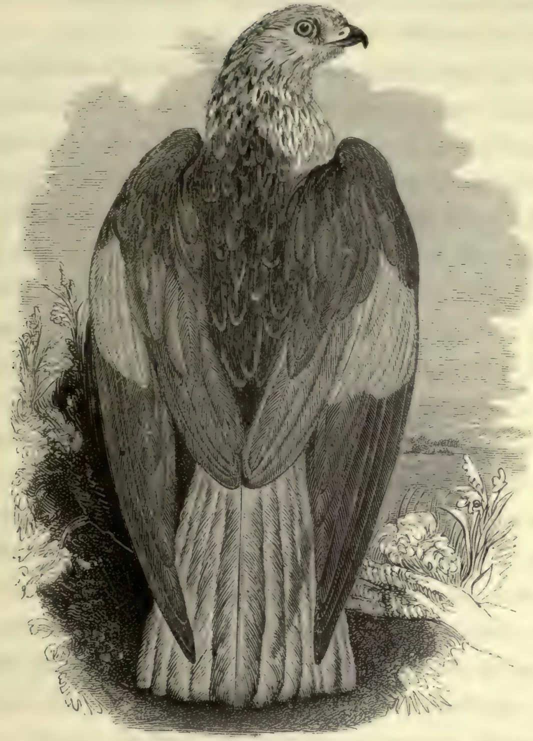
Willughby appears to have been the first to describe and name the Honey Buzzard as a British bird.

Besides various specimens obtained in Suffolk, Norfolk, and along the eastern coast as far north as Northumberland, which have been already referred to, the Honey Buzzard has been killed in several western counties, including Dorsetshire, Devonshire, and Worcestershire. Dr. Heysham considered it very rare in Cumberland, and had only met with one specimen: he was told that it bred in the woods at Lowther. Mr. Thompson of Belfast has recorded one example killed in the north of Ireland. Mr. Macgillivray mentions two instances of the occurrence of this species in Scotland,

According to Linneus, Brunnich, Muller, and Pennant, the Honey Buzzard inhabits Denmark, Norway, Sweden, and Russia. From thence southward, it is found in Germany, France, Italy, and the South of Europe generally. At Tangiers and in Sicily the Honey Buzzard is only seen in spring on its passage northwards. Dr. Ruppel says it is found in Egypt; and Mr. Gould and Mr. Blyth include it in their notices of the Birds of India.

The figure and description here given were taken from a specimen in the British Museum, which was killed near York. Honey Buzzards measure from twenty-two to twenty-five inches, depending on the sex. The beak is black; the cere grey, the irides yellow; the space between the beak and the eye covered with feathers, small, round, and closely set; the upper part of the head and back of the neck buffy white, with brown streaks; upper surface of the body and wings uniform brown colour; the primaries nearly black, the third and fourth feathers the longest and equal: the tail long; the upper surface of the tail-feathers barred transversely with two shades of brown: the front of the neck, breast, and belly, pale yellow brown; the shaft and middle line of each feather marked by a dark brown longitudinal streak or patch, those of the belly transversely barred: thighs and under tail-coverts varied with yellowish brown and white; the tarsi feathered half-way down, the lower portion reticulated and yellow; the toes yellow; the claws black, rather long, slender, and not much curved.

This species, like the other Buzzards, occasionally presents some variety in colour and markings. Those specimens which have the head of a uniform ash grey have been called the Capped Buzzard. A series of figures of the Honey Buzzard in various states of plumage are inserted in the Zoologist, vol. i. pages 376 and 377, from the drawings of William R. Fisher, Esq. of Yarmouth. The youngest birds are the darkest in colour on the body.



THE MARSH HARRIER.

Circus æruginosus.

Falco	*æruginosus,*	*Moor Buzzard,*	PENN. Brit. Zool. vol. i. p. 237.
”	”	” ”	MONT. Ornith. Dict.
”	”	” ”	BEWICK, Brit. Birds, vol. i. p. 26.
Buteo	”	” ”	FLEM. Brit. An. p. 55.
Circus	*rufus,*	*Marsh Harrier,*	SELBY, Brit. Ornith. vol. i. p. 66.
Buteo	”	” ”	JENYNS, Brit. Vert. p. 88.
Circus	”	” ”	GOULD, Birds of Europe, pt. xvi.
Falco	”	*Busard de Marais,*	TEMM. Man. d'Ornith. vol. i. p. 69.

CIRCUS. *Generic Characters.*—Beak small, bending from the base, compressed and elevated; cutting edge of the upper mandible with a slight festoon. Cere large. Nostrils oval. Lore covered with radiating hairs. Head surrounded with a ruff of small feathers. Wings long; the first wing-feather very short, the third or fourth feather the longest. Tail long. Tarsi long, slender, and naked; claws slightly curved, and very sharp.

THE MARSH HARRIER, though frequently called a Buzzard, is, in conjunction with the two British species to be described next in succession, immediately distinguished from the true Buzzards by the more elongated and slender form of their bodies, their lengthened, taper and naked legs, the still greater softness of their plumage, and by the circular disk of short feathers which surround the face. In the two points last mentioned,—namely, the loose and floculent character of the feathers, and the circular arrangement of those about the face,—the Harriers exhibit an obvious resemblance to the Owls, and the affinity on comparing the skeletons of each is most decided.

One of the remarkable traits in the species of the genus CIRCUS, as established by Bechstein, is, that the males when adult are all more or less ash grey in colour, while the females retain their original tints of red or brown. This at least is the case with all the known species, three of which are British. The Marsh Harrier is the largest of these, and appears to require a greater length of time than others of smaller size before the male exhibits any portion of the ash grey plumage; nor is it known, that I am aware, that this species ever at any age becomes entirely grey, like the other smaller males among the Harriers; but when the habits and plumage of the Marsh Harrier are duly considered, and compared with those of the two species which follow here in succession, no doubt will remain that the bird now under consideration is a true Harrier, and not a Buzzard. Our figure represents an old male.

The Marsh Harrier, as its name imports, is generally found on low and level lands, or uncultivated heaths and moors; and of the counties within a day's ride of London, examples appear to be most numerous in Cambridgeshire. Their flight, though slow, is smooth, performed with ease, but near the ground; and from the regular manner in which the species of this genus traverse the surface looking for prey, like a dog hunting for game, they have probably acquired the name of Harriers. The Marsh Harrier is said to roost on the ground, and may be seen sitting on a stone or low bush, seldom on a branch of a tree, looking out for objects for food, which it strikes when on the ground, and is not very particular in its choice, feeding on young rabbits or other small mammalia, birds,—preferring water birds,—reptiles, and, according to some authors, occasionally taking perch and other kinds of fish. The nest is placed on the ground, among long coarse grass, in a bunch of rushes, fern or furze, or at the base of a bush. The nest is formed of small sticks, rushes, or long grass: the eggs are three or four in number, of an oval shape, rather pointed at one end, white, two inches one line in length, and one inch six lines in breadth.

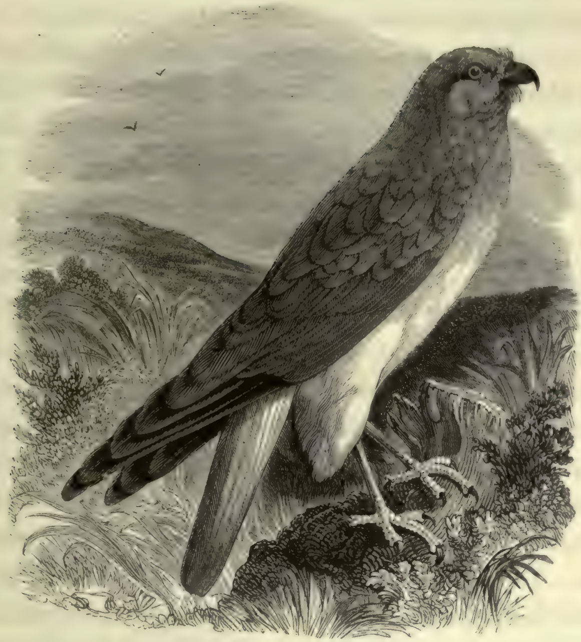
The Marsh Harrier occurs in most of the counties of England and Wales; in Ireland it has been ascertained, according to Mr. Wm. Thompson, to exist also in several counties from Cork to Antrim: it is found also in Scotland and in the Hebrides. It inhabits Denmark, Norway, Sweden, and the South of Russia, Germany, France, Holland, Spain, Italy, and Turkey. It is found at Corfu, Sicily, and Malta, and inhabits North Africa from Tripoli, and Algeria as far west as Tangiers. Mr. Strickland observed this species at Smyrna; and other naturalists have seen it at Trebizond and Egypt. Mr. Gould, in his Birds of Europe, mentions having received specimens of this bird in collections from the Himalaya Mountains; and Major Franklin obtained it in other parts of India.

The whole length of a Marsh Harrier is from twenty-one to twenty-three inches, the difference in size depending on the sex of the specimen. The figure here given was taken from an adult male bird in the British Museum, in which collection there are examples of various ages. In an adult male, the beak is bluish black, with a slight festoon on the cutting edge; the cere and irides yellow; the top of the head, cheeks, and nape of the neck, yellowish white, tinged with rufous, and streaked with dark brown; the back, wing-coverts, and tertials, dark reddish brown, with lighter margins; the primaries brownish black; the secondaries and all the tail-feathers ash grey. This state of plumage is not assumed till the third moult. In birds that are still older, the wing-coverts and tertials in addition become partially or entirely ash grey; the wing primaries slate grey; the chin and throat nearly white; the breast rufous, streaked longitudinally with dark brown; belly, thighs, and under tail-coverts, reddish brown, each feather streaked with dark brown; the legs long, slender, and yellow; the toes yellow; the claws sharp and black.

In young birds of the year, the whole of the plumage is chocolate brown; the feathers tipped with lighter reddish brown: the irides at this age are darker in colour than in the adult bird; the legs and feet as in old birds.

In the second year, the head, neck, chin, and throat become dull yellow, with an occasional patch of the same colour on the carpus, or anterior point of the wing. The figure by Mr. Bewick represents a bird in its second year.

Duck Hawk, Harpy, and White-headed Harpy, are names occasionally bestowed on the Marsh Harrier.



THE HEN HARRIER.

Circus cyaneus.

Falco	*cyaneus,*	*Hen*	*Harrier,*	Penn. Brit. Zool. vol. i. p. 239.
,,	,,	,,	,,	Mont. Ornith. Dict.
,,	,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 34.
Circus	,,	,,	,,	Flem. Brit. An. p. 53.
,,	,,	,,	,,	Selby, Brit. Ornith. vol. i. p. 68.
Buteo	,,	,,	,,	Jenyns, Brit. Vert. p. 89.
Circus	,,	,,	,,	Gould, Birds of Europe, pt. xi.
Falco	,,	*Busard St. Martin,*		Temm. Man. d'Ornith. vol. i. p. 72.

The decided difference in colour between the males and females of the true Harriers when adult is a subject now so well understood as to require to be noticed here only as a prominent illustration of one of the laws which appear to influence the assumption and changes of plumage in birds, to be hereafter more particularly adverted to. In the present instance, the old male, from his almost uniform ash grey colour as seen in the figure, is called provincially the Dove Hawk and Blue Hawk; and on account of a supposed partiality to some part of the produce of the farmyard, by the more general name of Hen Harrier. The female, called a Ringtail, is brown: a representation of the head of one forms the subject of the vignette, in which, from its spotted appearance, the circular ruff around the face is distinctly seen.

These birds inhabit flat marshy situations, fens, low moors and commons, partially covered with furze and short bushes. They feed indiscriminately on small mammalia, birds, and reptiles: twenty lizards were found in the stomach of one killed near London. They are considered to be particularly destructive to the young of Gallinaceous birds. Their flight performed apparently without much labour, is easy and buoyant, but not rapid, and generally within a few feet of the surface of the ground, which they appear to examine with great care, making close and diligent search for any object of food, and have courage and strength sufficient to pounce upon and kill a Partridge, a Red Grouse, or even a Pheasant. They have been observed to hunt the same ground regularly; and a male bird has been seen to examine a large wheat stubble thoroughly, crossing it in various directions, always about the same hour in the afternoon, and for many days in succession.

The nest is placed on the ground; the materials collected to form it are but few, consisting of small sticks and coarse grass: the eggs are four or five in number, white or of a pale skimmed-milk blue, one inch eight lines long by one inch four lines in breadth. The male sits occasionally during the period of incubation, and has been shot on the nest. The young are hatched early in June, and are at first covered with white down.

The Hen Harrier, though nowhere very numerous, is pretty generally distributed in England, Ireland, and Scotland. It inhabits the Hebrides and Orkneys, remaining in those northern islands all the winter. It appears to be less perfectly known in Scandinavia: but has been killed on some of the islands in the Baltic. Pennant, in his Arctic Zoology, says it is common in the open and temperate parts of Russia and Siberia, and extends as far as Lake Baikal. The Hen Harrier also inhabits Germany, France, Holland, Italy, Turkey, the Morea, Corfu, Sicily, and Malta; it was obtained at Smyrna by Mr. Strickland, and at Trebizond by K. E. Abbot, Esq. Le Vaillant found it in Africa, and describes it under the name of *Le Busard Grenouillard*.

Whether the Hen Harrier of North America be really identical with the Hen Harrier of Europe, is a point that is still debated. M. Temminck considers the specimens from Africa, and also those of North America, to be identical with those of Europe. Wilson the Ornithologist, the Prince of Musignano,—who has added four parts to the American Ornithology of Wilson, uniform in size and appearance with the original work,—and Mr. Audubon, consider the Hen Harrier of North America the same as that of Europe. Dr. Richardson and Mr. Swainson, appear to have some doubts on this point, but have adopted the nomenclature and synonymes of the European Hen Harrier; and indeed there is but slight difference in the markings of the plumage in the birds of the two countries, and none whatever in the habits. If this point of the identity of these two birds be admitted, the Hen Harrier may then be said to inhabit the whole of North America, in addition to the other localities already enumerated; and I may add, that several species of true Harriers are now known to exist on each of the large continents of the Old and New World.

The male and female, it has already been stated, are when adult so very different in colour as to have led formerly to the belief that they were distinct species; and we are indebted to Colonel Montagu for a series of observations detailed in the ninth volume of the Transactions of the Linnean Society, and afterwards in the Supplement to his Ornithological Dictionary, which, corroborated by the more recent observations of others, have clearly determined that the Hen Harrier and Ringtail are but the adult male and female of the same species.

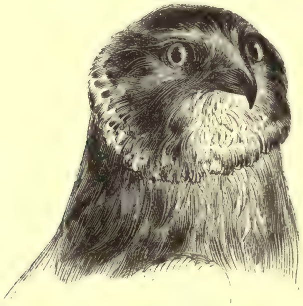
The whole length of the male is about eighteen inches; the bill black, or bluish black; the cere and irides yellow; the black hairs on the lore, or space between the base of the beak and the eye, radiate from a centre, those in a direction upward and forward meet and become mixed with those of the opposite side over the ridge of the cere, hiding the nostrils; the whole of the head, neck, back, wing-coverts, wings, and upper surface of the tail-feathers, ash grey; with the exception in my own specimen of a mottled brown spot on the nape of the neck, the last remaining portion of its former brown plumage; the wing-primaries nearly black, the first the shortest and the lightest in colour, the longest not reaching to the end of the tail; the chin and throat ash grey, like the other parts of the neck; the breast and belly lighter in colour, becoming bluish white; thighs and under tail-coverts white; under surface of the tail-feathers pale greyish white, with traces of five darker bars; the legs and toes slender and yellow; the claws black.

Young males are brown, like the female to be next described, but begin to change from the brown colour to the grey which distinguishes the sex, in their second autumn; young males are smaller in size, and have the irides lighter in colour than those of females at the same age. It is probable that young males are capable of breeding in their second year, before they have acquired their grey plumage, as two brown birds, apparently performing the duties of parents, have been shot at the same nest.

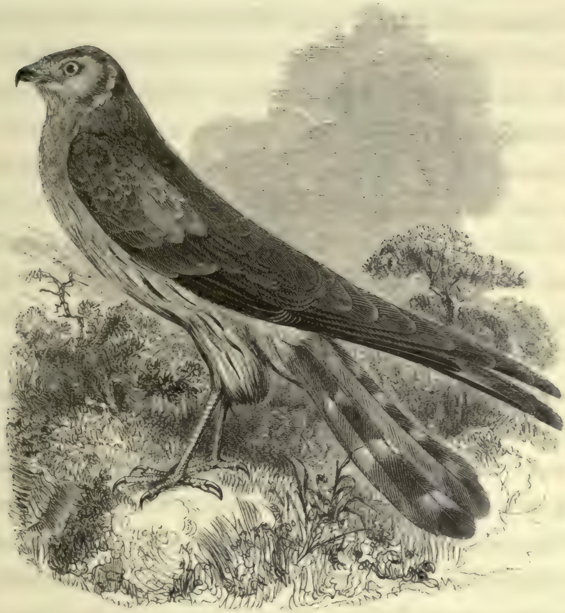
The female measures about twenty inches in length; the bill almost black; the cere greenish yellow, the irides reddish brown; the top of the head and back of the neck umber brown; the feathers of the latter with lighter reddish brown edges, forming a collar on the neck; over the eye a light-coloured streak; ear-coverts uniform umber brown; the circular disk or ruff round the face formed by short feathers of mixed brown and white colours, passing from behind the ear on one side round under the chin to the back of the ear on the other side; the back and wings uniform umber brown; the smaller wing-coverts margined with ferruginous; wing-primaries blackish brown; upper surface of the central tail-feathers uniform umber brown; the lateral tail-feathers dark brown, barred with lighter reddish brown; the ends of all the feathers pale ferruginous; the throat, breast, belly, thighs, and under tail-coverts, reddish buff colour, each feather having an elongated reddish brown patch in the centre, with a still darker shaft; those of the thighs and the under tail-coverts being lighter in colour, and less decidedly marked than those of the body; under surface of the middle tail-feathers strongly marked with broad bands of brownish black and dull white; the outer feathers on each side greyish white, with four darker transverse bars; the legs and toes yellow; the claws black.

In reference to our Harriers, a notice appears in the Naturalist for September, page 314, that some difference had been observed in the relative length of the quill-feathers: in a female the fourth quill-feather being the longest; in a male, the third. This notice is here adverted to in order that the relative length of the different quill-feathers in the wings, when referred to in description, or as affording indications of distinction in species, may not be too much relied upon without having due regard to the period of the year at which the birds were killed. In this country particularly, a large proportion of our cabinet specimens are obtained during autumn, the gun being then in general use, and during which period the quill-feathers will frequently be found not to have attained their ultimate relative proportions.

The vignette represents the head of the Ringtail, as referred to at page 102.



RAPTORES. *FALCONIDÆ.*



MONTAGU'S HARRIER.

Circus Montagui.

Falco	*hyemalis,*	*Ash-coloured*	*Falcon,*	PENN. Brit. Zool. vol. i. p. 243.
,,	*cineraceus,*	,,	,,	MONT. Ornith. Dict.
,,	,,	,,	,,	BEWICK, Brit. Birds, vol. i. p. 37.
Buteo	,,	,,	*Buzzard,*	FLEM. Brit. An. p. 55.
Circus	,,	,,	*Harrier,*	SELBY, Brit. Ornith. vol. i. p. 70.
Buteo	,,	,,	,,	JENYNS, Brit. Vert. p. 90.
Circus	,,	,,	,,	GOULD, Birds of Europe, pt. xi.
Falco	,,	*Busard Montagu,*		TEMM. Man. d'Ornith. vol. i. p. 76.

ONE of the very few alterations in the names of our British Birds which will be proposed in this work, refers, as seen above, to this Harrier; and it is hoped that the reasons to be given for adopting this change will be considered even more than sufficient to justify it.

The specific distinction of the Ash-coloured Harrier was first demonstrated by Colonel Montagu, in consequence of which M. Temminck, Vieillot, and Meyer, have called this bird *Le Busard de Montagu*, and probably other Continental naturalists have done the same, as a tribute due to the discernment of our English Ornithologist; there seems to be no good reason, therefore, that Montagu's own countrymen should not now adopt this complimentary memorial. At this time a fourth species of Harrier has been made known in the twenty-second and last part of Mr. Gould's Birds of Europe; and others have been described as belonging to different parts of Asia, Africa, and America, in each of which the adult males, as in all the true Harriers, are more or less ash-coloured; this term, therefore, no longer conveys a specific distinction. To this I may add, that Montagu himself, either by mistake or error of the press, has called this bird *cineraceus* in his Ornithological Dictionary, *cinerarius* in his supplement to the Dictionary and *cinerareus* in his paper in the Linnean Transactions, volume the ninth, page 188; it will therefore be an advantage, as well as a gratification, to call this bird in future Montagu's Harrrier, and *Circus Montagui.*

Specimens of Montagu's Harrier of either sex may be readily distinguished from those of the Hen Harrier, although about equal to them in length, by being much more slender in shape, and not near so heavy, the average weight of Montagu's Harrier being about nine and a quarter ounces, that of the Hen Harrier about thirteen ounces; the wings are also longer in reference to the end of the tail, and the third quill-feather of the wing is much more pointed; but in their habits, and the sort of country they are most partial to, the two species are very similar.

Mr. Selby, who has observed and obtained several examples in Northumberland, says, "it skims along the surface of the ground like the Hen Harrier, but with more rapid flight, and more strikingly buoyant." Its food is small birds and reptiles: the stomach of one examined by Montagu contained the remains of a Skylark; and Mr. Orton Aikin found portions of five lizards in a male killed in Cambridgeshire. The nest is placed on the ground, generally among furze; the eggs seldom exceeding four in number, very similar, as might be expected, to those of the Hen Harrier; they are white, one inch seven lines in length, and one inch four lines in breadth. The young, according to Mr. Jenyns, are hatched about the second week in June.

Montagu's Harrier has been met with in the counties of Devonshire and Cornwall, and Mr. Eyton informs me he has received one specimen from Dolgelly; but farther than this to the westward I have not traced it, no examples as far as I am aware having as yet been recognised by Ornithologists in Ireland. North of London it appears to be most plentiful in Cambridgeshire and Lincolnshire. At the latter end of the summer of 1831, my friend Mr. Orton Aikin had in his garden at Cambridge the young of each of our three species of Harriers, and was bringing them up together. They had been procured in the fens within a few miles. Three or four specimens of Montagu's Harrier are recorded by Mr. Selby as having been obtained in Durham and Northumberland; but Mr. Macgillivray says it has not, as far as he knows, been observed in Scotland.

According to M. Temminck, and other naturalists, Montagu's Harrier is found in Poland, Germany, and France. M. Baillon found it in the marshes of Abbeville, and considered it a summer visitor, appearing in April and departing in October. M. Temminck says it is very common in the marshes of Holland. It inhabits Provence, Dalmatia, Italy, Sicily, Malta, and on the same parallel as far east as Trebizond. Mr. Blyth has found this species in India.

The length of the adult male is about seventeen inches. The beak is nearly black; the cere greenish yellow, and partly hid by the radiating hairs of the lore; the irides bright yellow; the head, the whole of the neck, back, wing-coverts, secondaries, and tertials, bluish grey; the secondaries with three dark bars across, the last of which is visible externally when the wing is closed; the primaries almost black; upper surface of the central tail-feathers bluish grey; the lateral tail-feathers white, barred with reddish orange; breast, belly, and under tail-coverts, white with various longitudinal streaks of reddish orange: under wing-coverts barred with reddish brown; under surface of tail-feathers dull white, barred with dusky grey; legs and toes slender and yellow; the claws black.

A young male in my own collection, from which the figure was taken, killed while undergoing his second moult, and in a gradual state of change, has the top of the head and the feathers round the cheeks a mixture of brown and rufous, ear-coverts grey; occiput varied with white; the nape, back, scapulars, tertials, and upper tail-coverts, lead grey; upper surface of all the tail-feathers, except the two in the middle, barred with two shades of brown and rufous; middle tail-feathers, with the outer webs uniform pearl grey; the inner webs with five dark brown bands on a greyish ground; wing-primaries and secondaries blackish brown; great wing-coverts dark brown; lesser wing-coverts lighter brown varied with rufous, and two or three grey feathers; chin, and front of neck, pearl grey; breast, belly, thighs, and under tail-coverts, white, with a longitudinal rufous stripe on the centre of each feather; under surface of tail-feathers barred with greyish white and brown; legs, toes, and claws as in the adult male.

A young male in the plumage of the first year has the head and neck ferruginous, each feather with a central lanceolate patch of dark brown; back and wings umber brown; wing-coverts with broad ferruginous margins; primaries brownish black; secondaries and tertials tipped with rufous; upper tail-coverts white, tipped with red; upper surface of the tail-feathers with five bands of dark brown, and four bands of greyish brown; ear-coverts uniform umber brown; chin, throat, breast, belly, thighs, and under tail-coverts, uniform reddish brown; under surface of wings the same; under surface of tail-feathers dull reddish white, with four or five bands of brownish grey; legs, toes, and claws, as in older birds.

The adult female of Montagu's Harrier measures nineteen inches; the beak black; the cere dull yellow; the irides hazel; crown of the head and nape reddish brown, with darker brown spots; above and below the eye a streak of dull white; ear-coverts dark brown; back and wings dark umber brown; rump and upper tail-coverts mixed with white and orange brown; upper surface of the central tail-feathers uniform dark brown; lateral tail-feathers barred with two shades of brown; breast, belly, and all the under surface of the body, light reddish brown, with longitudinal marks of a darker colour; legs and toes yellow; claws black. In very old females of this species the general colour of the plumage is lighter and the irides become bright yellow. Young females have the whole of the under parts from the throat to the under tail-coverts of a uniform reddish bay, without any of the darker-coloured streaks observable in adult females.

Having thus described the last of the British *Falconidæ*, it may be desirable, before quitting this group, to exhibit a representation of the breast-bone, or sternum, of one of the types of the Falcons, in order to show in the form and magnitude of the principal bone, and the others attached to it, the power of flight possessed by these birds, of which the breast-bone affords good comparative indication.

The power of flight is one of the decided characteristics of the organization of the class of Birds; and the division of the *Falconidæ* includes those birds which appear to possess this power in the highest degree of perfection. The conditions necessary to produce this power in its fullest extent are, large and strong pectoral muscles; great extent of surface, as well as peculiarity of form, in the wing; and feathers of firm texture, strong in the shaft, with the filaments of the plume arranged and connected to resist pressure from below. The extent of surface, the form and other peculiarities of the wings, have been already noticed, and the anatomical part only requires to be briefly described. A certain degree of specific gravity is necessary to rapid flight, and this is imparted by large pectoral muscles; the power of these muscles may be estimated by the depth of the keel, and the breadth of the sides of the breast-bone or sternum, as affording extent of surface for the attachment of those large muscles by the action of which the wings are brought down.

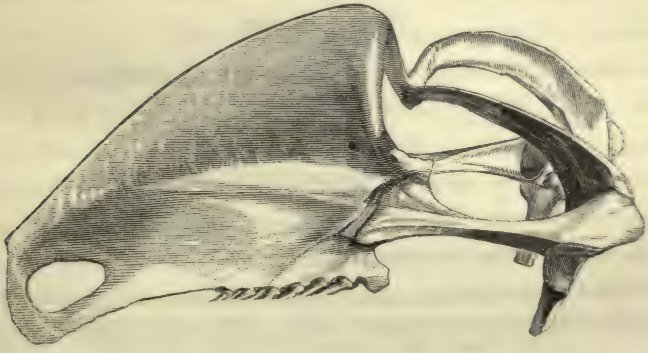
As an illustration of this form, the figure here inserted as a vignette is a representation about one-fourth less than the natural size of the breast-bone of a young male Peregrine Falcon, which exhibits the depth of the keel, the breadth of the sides, as well as the strength of the coracoid bones; and the power of flight peculiar to all the species of Falcons is still further illustrated by the form and substance of the forked bone,* commonly called the merrythought, which is circular, broad, and strong, affording a permanent support to the shoulders.

By an extended examination of the different species of Buzzards and Harriers, it will be found that the characters described as necessary to produce rapid flight decline gradually. The sternum decreases in size, the keel loses part of its depth, the coracoid bones and furcula become more slight; while the form of the cranium, the loose ruffled feathers of the neck, as well as the softer and more downy texture of the plumage generally, indicate an approach to the family next in succession.

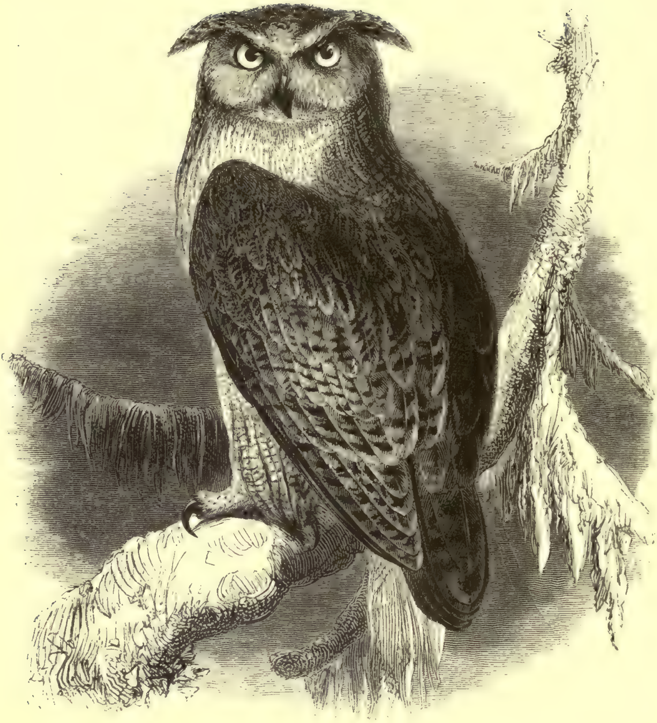
A representation of the sternum of an Owl will be inserted as a vignette to one of the species, to afford a comparative view of the size and structure of the same part in the diurnal and nocturnal Birds of Prey.

---

* Which, when the two sides are united, represents both clavicles.



RAPTORES. *STRIGIDÆ.*



EAGLE OWL.

Bubo maximus.

Strix Bubo,	*Eagle Owl,*	PENN. Brit. Zool. vol. i. p. 254.
" "	*Great-eared Owl,*	MONTAGU, Ornith. Dict.
" "	*Eagle Owl,*	BEWICK, British Birds, vol. i. p. 56.
Bubo maximus,	" "	FLEM. Brit. An. p. 57.
" "	" "	SELBY, Brit. Ornith. vol. i. p. 82.
" "	" "	JENYNS, Brit. Vert. p. 90.
" "	" "	GOULD, Birds of Europe, pt. vi.
Strix Bubo,	*Hibou Grand Duc,*	TEMM. Man. d'Ornith. vol. i. p. 100.

BUBO. *Generic Characters.*—Head furnished with two tufts of feathers. Bill short, strong, curved, compressed at the point. Nostrils pierced in the cere, large, oval or rounded. Facial disk incomplete about the eyes. Auditory opening, small, oval, without an operculum. Wings rather short, concave; the third and fourth quill-feathers generally the longest. Legs and toes covered with feathers; claws long, curved, and sharp.

The characters and appearance of Owls are so singular and so peculiar, that once having seen them they are not readily forgotten. They have but little external beauty of form. The head is large, the expression grotesque, the body bulky in appearance, the plumage soft and downy. Unlike the Falcons, which hunt for their food by day, the Owls seek their prey during the twilight of morning and evening, and probably during the greater part of the night, if the state of the moon or the atmosphere affords sufficient light for the purpose. From this habit of flying at night, the singular appearance of the bird produced by the arrangement of the feathers of the face, forming a broad circular disk, a peculiar hollow tone of voice, unlike that of any other bird, and the additional circumstance of most of the species selecting ivy-covered ruins of sacred edifices as places of resort from the solitude and protection the character of such remains afford, Owls have been considered by the superstitious as birds of darkness and ill-omen, and by some even as messengers of death. Thus Shakspeare says—

> "Out on ye, Owls! nothing but songs of Death."
>
> *Richard the Third.*

The eyes of Owls are large, and appear to be particularly susceptible of impression from light. If exposed to the glare of day, most of the species seem to be powerfully affected by it, and the eyes are either closed entirely or defended by an internal eyelid, which is brought down with ease and rapidity. The power of hearing in Owls is probably more acute than in many other birds; the auditory opening in some species is very large, and covered by an operculum, which is elevated or closed at pleasure. Their flight is easy and buoyant, but not rapid; and from the soft texture of the feathers, even those of the wings, their flight is performed without noise.

The species vary greatly in size; and, according to their several powers, their food consists of mammalia, birds, reptiles, and occasionally fishes; while, among the smaller species of Owls, twilight-flying beetles and large moths are the objects of search. Owls, like the Falcons, return by the mouth the indigestible parts of the food swallowed in the form of elongated pellets; these are found in considerable numbers about the usual haunts of the birds, and examination of them, when softened in warm water, detects the nature of the food.

The Owls are usually arranged in two principal groups: one in which all the species exhibit two tufts of feathers on the head, which have been called horns, ears, and egrets; in the second group, the heads are smooth and round without tufts.

The Eagle Owl is one of the largest species of the family, and inhabits the North of Europe generally; but must be considered a rare bird in England, an example occurring only occasionally, and at uncertain intervals. Its food consists of the larger sorts of game among mammalia as well as birds, such as fawns, hares, grouse, &c. which it pounces on upon the ground, seizing its prey with its feet, and seldom advancing its head towards the victim till its struggles are over.

The nest of this bird is large, the materials collected being spread over a surface of several square feet among rocks, or the walls of old ruins. The female is larger than the male, and produces two or three eggs of a short oval shape, two inches five lines long by one inch ten lines wide, and perfectly white.

Linneus, when making a tour in Lapland, found this bird and its nest on one of the highest hills of that country on the 17th of May. The nest contained an addled egg and two young birds: these last were of small size, with a soft whitish covering like wool. On the 16th of June he found two other young birds of the same species which were nearly full grown, but unable to fly. In these young specimens the bill was black; irides saffron yellow; pupil bluish black; the general plumage soft; the wings dark, with reddish brown spots; feathers of the breast brick-red, with a dark indented longitudinal stripe; tail-feathers still short, dark, with roundish red spots; feet reddish brown.

"Owls have been noticed for an extraordinary attachment to their young. An instance in point was witnessed by a Swedish gentleman, who resided several years on a farm near a steep mountain, on the summit of which two Eagle Owls had built their nest. One day in the month of July, a young bird, having quitted the nest, was caught by the servants. This bird was, considering the season of the year, well feathered; but the down appeared here and there between those feathers which had not yet attained their full growth. After it was caught, it was shut up in a large hencoop, when to his surprise, on the following morning, a fine young Partridge was found lying dead before the door of the coop. It was immediately concluded that this provision had been brought there by the old Owls, which no doubt had been making search in the night time for their lost young one. And such was, indeed, the fact; for night after night, for fourteen days, was this same mark of attention repeated. The game which the old ones carried to it consisted chiefly of young Partridges, for the most part newly killed, but sometimes a little spoiled. On one occasion, a Moor-fowl was brought, so fresh that it was actually warm under the wings; and at another time, a putrid stinking lamb was deposited."[*]

In the southern and western counties of England, the Great Eagle Owl has been obtained in Kent, Sussex, and Devonshire: in the counties north of London, it is recorded as having been taken in Suffolk, Yorkshire, and Durham. The only record of the Eagle Owl's occurrence in Ireland, according to Mr. Thompson,[†] appears in Mr. Stewart's Catalogue of the Birds of Donegal, in the following words:—"Four of these birds paid us a visit for two days, after a great storm from the north, when the ground was covered with snow. They have not since been seen here. As I am informed that a pair of them breed in Tory Island, about nine miles to the north of this coast, it is probable that they came from that island. I have heard of them nowhere else."

This bird inhabits Denmark, Sweden, Norway, Lapland, Russia, and the continent of Europe generally, but particularly the fir-covered mountains of Switzerland, and the high rocky country of Aragon, extending southward as far as Italy, Turkey, Corfu, and Sicily. Mr. Strickland saw specimens at Smyrna, and it is recorded as inhabiting the Morea. Pennant says it is found as far to the eastward as Lake Baikal and Astrachan; and Mr. Gould has seen skins of this bird in collections from China.

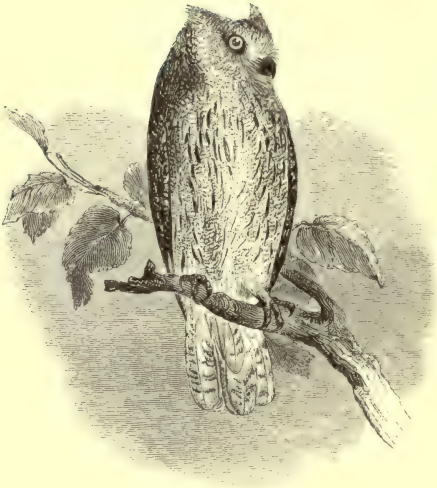
It is well known as a species here, being constantly exhibited in various menageries, where it is mostly quiet, uttering no sound except an occasional sharp and snapping noise made with the bill. Our figure was taken from a bird in the Garden of the Zoological Society, and the description from specimens in the museum. The beak is nearly black, the base of it hid by the radiating feathers forming the inner portion of the facial disk; irides bright orange; the tufts on the head contain seven or eight dark-coloured feathers, with light brown bars on the inner webs; the head, neck, and back, a mixture of reddish brown and dark brown, the darker colour occupying the centre of each feather, forming streaks; the other parts of the web mottled; wing-primaries and tail feathers similar in colour, but barred transversely; the feathers of the facial disk light brown speckled with greyish black, those under the disk white; breast pale brown, with longitudinal patches of dark brown; belly, under tail-coverts, thighs, legs, and toes, pale brown; with numerous narrow transverse bars of dark brown; under surface of tail-feathers dusky brown, barred with pale brown; claws long, curved and black. The whole length of a specimen is from twenty-four to twenty-eight inches, the difference depending upon sex and age. Two preserved specimens of females in the Museum of the Zoological Society are darker in the general colour of their plumage than a male in the same collection, and both have the throat white. They are old birds.

---

[*] Familiar History of Birds, by the Rev. E. Stanley, Bishop of Norwich, vol. i. p. 184.

[†] Mag. of Zool. and Bot. vol. ii. p. 176.

RAPTORES *STRIGIDÆ.*



THE SCOPS EARED OWL.

Scops Aldrovandi.

Strix Scops,	*Little Horned Owl,*	Mont. Suppl. to Ornith. Dict.
,, ,,	*Scops Eared Owl,*	Bewick, Brit. Birds, vol. i. p. 71.
Scops Aldrovandi,	*Scops Owl,*	Flem. Brit. An. p. 57.
,, ,,	,, *Eared Owl,*	Selby, Brit. Ornith. vol. i. p. 92.
Bubo Scops,	,, ,, ,,	Jenyns, Brit. Vert. p. 91.
Scops Aldrovandi,	,, ,, ,,	Gould, Birds of Europe, pt. ix.
Strix Scops,	*Hibou Scops,*	Temm. Man. d'Ornith. vol. i. p. 103.

Scops. *Generic Characters.* — Head furnished with two tufts of feathers. Beak curved from the base. The nostrils round. Facial disk incomplete, not extending over the forehead; auditory conch small, and without an operculum. Wings long reaching to the end of the tail; the third quill-feather generally the longest. Legs rather long, feathered to the junction of the toes: the toes naked; claws curved and sharp.

This little tufted Owl, one of the smallest of the family, found in this country, was first noticed as a British Bird by Colonel Montagu from specimens killed in Yorkshire, which are still preserved, and other examples have occurred. It is, however, so rare, that little has been observed of its habits here. It is believed, and with reason, to be migratory, visiting us in summer, and retiring, before the cold weather commences, to the south of Europe and to North Africa. It is said to be strictly nocturnal, feeding upon mice, beetles, and large moths. It forms a simple nest in the fissures of rocks, or in holes of trees, laying from two to four or five eggs, which are white, one inch three lines in length, by one inch and half a line in breadth.

One example of this little Owl was taken some time since near London; and I am indebted to Mr. Joseph Clarke, of Saffron Walden, for the knowledge of the occurrence of two specimens on the estate of Lord Braybrooke, at Audley End in Essex. Dr. Hastings, in his Natural History of Worcestershire, notices one that was taken alive near Fladbury, and brought to the residence of the late Mrs. Perrot, at Chantry. One shot in Yorkshire, is said to be in the collection of Mr. Foljambe of Osberton; a second, shot near Wetherby in the spring of 1805, is in the collection of Mr. Fothergill of York; and a third example, also shot in Yorkshire, is recorded by Mr. Selby to have been in the possession of the late Mr. Thomas Bewick. My friend Mr. John Hogg of the Temple, in his Natural History of the vicinity of Stockton-on-Tees, says of the Scops, that it "breeds in Castle Eden Dene. Mr. Winch informs me, that he has seen young birds just taken from the nest by the woodman."—*Page* 4.

This little species, though inhabiting an extensive range in different countries, is confined to the temperate and warmer parts of the Old World, where insects are known to abound. Mr. Gould, in his Birds of Europe, says it is found in Asia. It does not visit the North of Europe even in summer, but is found at that season in the southern part of Germany. In France it is not uncommon, and is said to appear and depart with the Swallow. Advancing southward to the shores and islands of the Mediterranean, it is even plentiful; and Mr. W. Spence, the well known Entomologist, has thus recorded its summer habits:—*

"This Owl, which in summer is very common in Italy, is remarkable for the constancy and regularity with which it utters its peculiar note or cry. It does not merely 'to the moon complain' occasionally, but keeps repeating its plaintive and monotonous cry of '*kew*, *kew*,' (whence its Florentine name of *Chiù*, pronounced almost exactly like the English letter Q,) in the regular intervals of about two seconds, the livelong night; and until one is used to it, nothing can well be more wearisome. Towards the end of April last year, 1830, one of these Owls established itself in the large *Jardin Anglais*, behind the house where we resided at Florence; and, until our departure for Switzerland in the beginning of June, I recollect but one or two instances in which it was not constantly to be heard, as if in spite to the Nightingales which abounded there, from nightfall to midnight (and probably much later), whenever I chanced to be in the back part of the house, or took our friends to listen to it, and always with precisely the same unwearied cry, and the intervals between each as regular as the ticking of a pendulum. This species of Owl, according to Professor Savi's excellent *Ornithologia Toscana*, v. i. p. 74, is the only Italian species which migrates; passing the winter in Africa and southern Asia, and the summer in the south of Europe. It feeds wholly upon beetles, grasshoppers, and other insects."

This little Owl, according to Dr. Smith, goes as far south in Africa as Senegal; but the species described by Mr. Swainson under the name of *Scops Senegalensis*, in his

---

* Mr. Loudon's Magazine of Natural History, vol. v. p. 654.

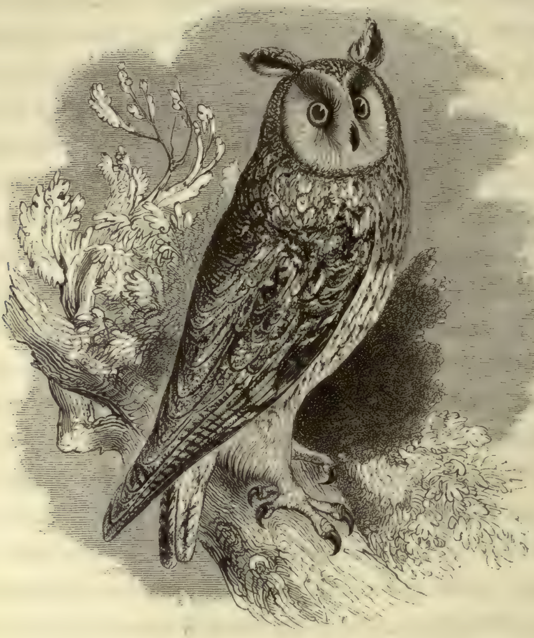
Birds of Western Africa, recently published, is, as that gentleman has stated, a distinct species from that found in Europe, and both of them are distinct from that named *capensis* by Dr. Smith, which is found at the Cape. By the kindness of Dr. Smith, I have been enabled to compare the European Scops with both the African species.

The beak is black; the irides bright yellow; the feathers of the facial disk minutely speckled with greyish white and brown, the margin of the disk on each side defined by a darker brown line; from the beak over the top of the head are several longitudinal streaks of dark brown on a pale brown ground, forming a central band passing over the head between the tufts, which are short, made up of a few feathers slightly elongated, differing but little in colour from the grey speckled feathers of the facial disk; the back chesnut and pale wood brown, mottled with grey, and barred with dark lines; the outer web of the wing-feathers barred alternately with white and speckled brown; tail barred and spotted with black, brown, and pale wood-brown; the whole of the breast and belly varied with greyish white and pale brown, with several decided streaks and patches of umber brown; under tail-coverts and under surface of tail-feathers greyish white, mottled and barred transversely with brown; thighs and legs to the junction of the toes covered with short speckled feathers; toes brown; claws white at the base, nearly black at the tip.

The males and females are very similar in plumage, but young birds have a more rufous tinge.

The whole length of a specimen is about seven inches and one quarter.

RAPTORES. *STRIGIDÆ.*



LONG-EARED OWL.

Otus vulgaris.

Strix otus,	*Long-eared Owl,*	PENN. Brit. Zool. vol. i. p. 258.
„ „	„ „	MONTAGU, Ornith. Dict.
„ „	„ „	BEWICK, Brit. Birds, vol. i. p. 60.
Otus vulgaris,	*Long-horn* „	FLEM. Brit. An. p. 56.
„ „	*Long-eared* „	SELBY, Brit. Ornith. vol. i. p. 85.
„ „	„ „	JENYNS, Man. Brit. Vert. p. 91.
„ „	„ „	GOULD, Birds of Europe, pt. viii.
Strix otus,	*Hibou moyen duc,*	TEMM. Man. d'Ornith. vol. i. p. 102.

OTUS. *Generic characters.*—Head furnished with two tufts, more or less elongated. Beak curved bending from the base; cere large; under mandible notched. Nostrils oval, oblique. Facial disk complete. Auditory opening large, covered by an operculum. Wings long; the second quill-feather generally the longest. Legs and toes feathered to the claws.

THE LONG-EARED Owl, from the variety and beauty of the markings on its plumage, is a very handsome species, and though probably not numerous anywhere, is by no means unknown or uncommon in most wooded districts. It appears to resort to large woods, in which it makes choice of an old tree well covered with ivy for a hiding-place; thick plantations also of evergreens, fir, holly, &c. are favourite haunts, those of spruce fir more particularly, according to Mr. Selby, being preferred.

This species of Owl remains in this country throughout the year. It makes little or no noise, except when young, seldom moves in the day-time, unless disturbed, and then bustles out, close to you, with every mark of fear and confusion. It feeds upon rats, moles, mice, and small birds. In the stomach of one individual, Mr. Selby found five skulls of mice; and one I examined contained the remains of a Goldfinch. It is believed that this Owl obtains small birds by taking them off their roost.

The Long-eared Owl is said not to make a nest for itself, but to take to the deserted habitation of some other bird, when of sufficient size for its own wants; and has been known to rear its young in the old drey of a squirrel. The eggs are four or five in number, oval, smooth, and white; one inch eight lines and a half long, by one inch three lines and a half in breadth. The young, hatched by the end of April, are then covered with white down, and do not quit the nest during the first month; when they do, Mr. Selby says, "they take up their abode in some adjoining tree, and, for many subsequent days, indeed for weeks, may be heard after sunset uttering a plaintive call for food, during which time the parent birds are diligently employed in hawking for prey."

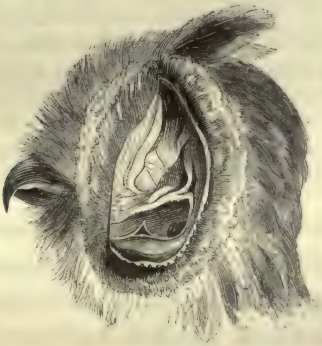
The Long-eared Owl inhabits most of the southern and western counties of England, from Sussex to Cornwall. According to Mr. Thompson of Belfast, "it occurs throughout Ireland, and is resident. Where a sufficient extent of wood exists in the counties of Down and Antrim, it is a common species. An individual, well acquainted with the Long-eared Owl, said that in a close plantation of spruce firs at Scoutbush, near Carrickfergus, he for several years had its nest, which, in consequence of the trees being young, were placed not higher than six feet from the ground. The contents of the stomach of a Long-eared Owl, shot at Killaloe, and examined by the Rev. Thomas Knox, proved to be part of a rat, the skull of a mouse, and the heads of two Sparrows."

This species is found in most of the midland counties of England, and is noticed by various authors as occurring in Cumberland, Northumberland, Durham, and Scotland. It inhabits also Denmark, Norway, Sweden, Russia, and the continent of Europe, from thence southward. In France it is the most common of all the Owls, and is found in Spain, Italy, Turkey, and Sicily. It has been traced as far eastward as Astrachan, and southward to Trebizond, Egypt, and Africa. This bird also inhabits most of the United States of America. According to Dr. Richardson, it has been found as far north as latitude 60°, and probably exists as high as the forests extend. Captain Back took one specimen on his last journey. It frequents Hudson's Bay in the summer, but retires to the interior during winter.

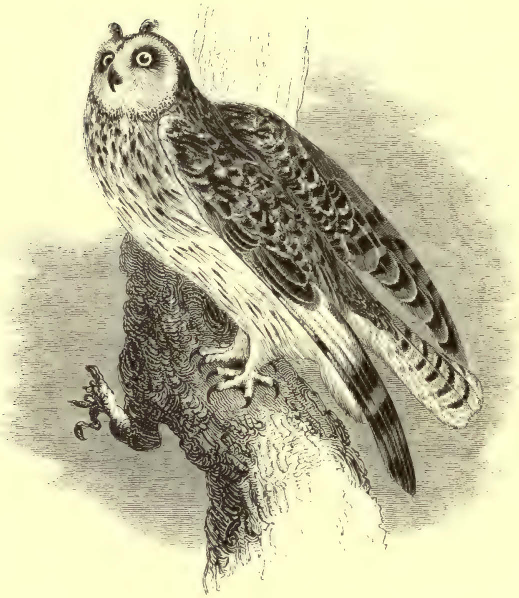
The exposed portion of the beak is black; the base and cere are hid by the feathers of each inner side of the facial disk; the irides orange yellow; radiating feathers of the facial disk on each outer side pale brown, with a half circular boundary line of darker brown; on the inner side varied with dusky brown at the base, and white towards the tips; the tufts on the head an inch and a half in length, are formed of about seven or eight feathers, longer than wide, dark brownish black in the middle, with pale brown edges; top of the head between the tufts a mixture of brownish black and pale brown; nape, round the neck, and the upper part of the back marked with longitudinal streaks of brownish black on a surface of light brown; feathers of the back, wing-coverts, secondaries, and tertials, a speckled mixture of black and dark brown on pale brown; wing-primaries light chesnut brown, barred and speckled with darker brown; the second quill-feather the longest, and the wing when closed reaching a little beyond the end of the tail; upper surface of tail-feathers the same colour; feathers of the breast and belly a mixture of greyish white and pale brown, with longitudinal streaks of umber brown; thighs and under tail-coverts uniform pale brown; under surface of tail-feathers greyish white, with narrow transverse bars of dusky brown; legs and toes covered with short uniform pale brown feathers; the extreme ends of the anterior toes bare; claws rather long, curved, very sharp and black.

The whole length is from fourteen to fifteen inches.

The vignette represents the orifice of the ear in this species, from the work of Mr. Macgillivray on the Rapacious Birds of Great Britain.



RAPTORES. *STRIGIDÆ.*



SHORT-EARED OWL.

Otus brachyotos.

Strix	*brachyotos,*	*Short-eared*	*Owl,*	PENN. Brit Zool. vol. i. p. 260.
,,	,,	,,	,,	MONTAGU, Ornith. Dict.
,,	,,	,,	,,	BEWICK, Brit. Birds, vol. i. p. 62.
Otus	,,	*Short Horn*	,,	FLEM. Brit. An. p. 56.
,,	,,	*Short-eared*	,,	SELBY, Brit., Ornith. vol. i. p. 88.
,,	,,	,,	,,	JENYNS, Brit. Vert. p. 92.
,,	,,	,,	,,	GOULD, Birds of Europe, pt. xviii.
Strix	,,	*Hibou brachiote,*		TEMM. Man. d'Ornith. vol. i. p. 99.

THE SHORT-EARED OWL is not only numerous as a species, but is also very widely diffused, as the localities in various countries to be hereafter named will show. Unlike the species last described, which hides itself in large woods, or dense plantations, this bird frequents wide open fields, extensive commons, heaths, and moors. A large proportion of the specimens seen in this country are winter visitors that come from the North of Europe with the first favourable wind in October, and have in consequence been called Woodcock Owls. There are few sportsmen who have not occasionally met with this Owl when Partridge shooting, towards the end of October, either in old grass fields, barley stubbles, or turnips. It lies close, and when obliged to move flies only a short distance, and is very easily obtained. In winter, when the fields are bare, it shelters itself in the bottoms of thick hedge-rows. From its small-head and its habit of looking for food during the day, Pallas calls this species *Stris accipitrina*, and Hawk Owl is also a common name for it in this country. Many of those that visit Great Britain in the autumn and winter months, retire northward again in the following spring; but some few remain and breed, not only in the Orkneys, in Scotland, and in some of the northern counties of England, but even much farther south than has hitherto been apprehended.

Mr. Low says it breeds frequently in the island of Hoy, one of the Orkneys, forming an artless nest among the heath. Two young birds, nearly ready to fly, had been supplied by the parent birds with a Moorfowl and two Plovers. Sir William Jardine considers that many are bred on the Scottish moors. In one locality in Dumfriesshire, Sir William found two nests with five eggs. "They were formed upon the ground among the heath; the bottom of the nest scraped until the fresh earth appeared, on which the eggs where placed, without any lining, or other accessory covering. When approaching the nest or young, the old birds fly and hōver round, uttering a shrill cry, and snapping with their bills. They will then alight at a short distance, survey the aggressor, and again resume their flight and cries. The young are barely able to fly by the 12th of August, and appear to leave the nest some time before they are able to rise from the ground. I have taken them, on that great day to sportsmen, squatted on the heath like young black game, at no great distance from each other, and always attended by the parent birds. Last year (1831) I found them in their old haunts, to which they appear to return very regularly; and the female, with a young bird, was procured. The young could only fly for sixty or seventy yards."

Mr. Selby, from finding old birds during summer and on the 12th of August, at which time they were moulting, believes that a few pairs breed on the higher moors of Northumberland, and probably also some on those of Westmoreland and Cumberland. Mr. Hoy, in the Magazine of Natural History, says, "I am acquainted with two localities in the south-western part of Norfolk, where pairs of this bird breed; and I have known several instances of their eggs and young being found. One situation is on a dry heathy soil, the nest placed on the ground amongst high heath; the other in low fenny ground, among sedge and rushes: a friend of mine procured some eggs from the latter situation during the last summer (1832). The Short-eared Owl is pretty common in many parts of Norfolk during the autumn and winter, the great majority of them retiring northwards in the spring, only leaving a few scattered pairs to breed in this district."

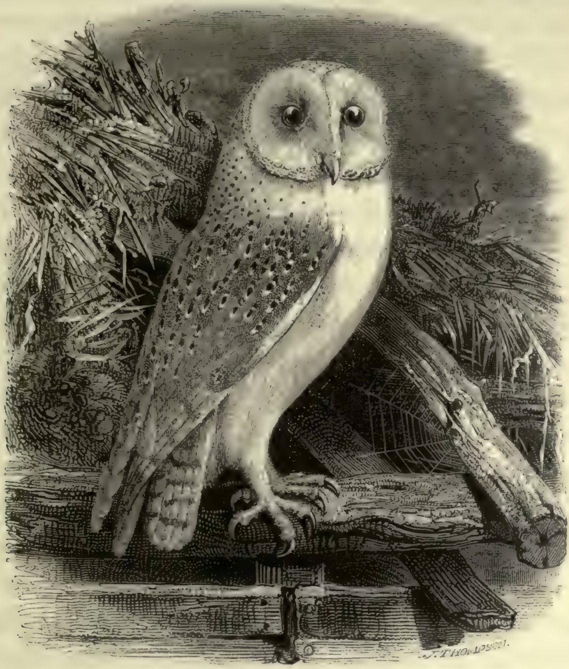
The eggs of this bird, seldom exceeding three in number, are smooth and white, one inch eight lines in length, by one inch three lines and a half in breadth.

Small quadrupeds and small birds form the principal food of this Owl. In the stomach of one, Colonel Montagu found the remains of a Skylark and a Yellowhammer. Mr. Thompson of Belfast found the legs of a Purre, *Tringa variabilis* of Meyer and Temminck; and in the stomach of one examined by myself, were a half-grown rat, and portions of a bat; but this is the only bird in the stomach of which I ever found the remains of a bat. Wilson, however, in his account of the White, or Barn Owl, says that bats are the favourite food of most of the American Owls.

The Short-eared Owl is well known in most of, if not all, the southern and western counties of England, and according to Mr. Thompson, is one of the regular winter visitors to the northern counties of Ireland, preferring wet and boggy places, where Snipes might be expected. Localities in the north of England, in Scotland, and the Orkneys, have been already named. It inhabits the whole of the continent of Europe, and is found also in India and in China. It is found also on many of the islands of the Mediterranean, and on the African continent. Dr. Richardson says, "it is a summer visitor to the fur-countries of North America, arriving as soon as the snow disappears, and departing again in September. It was observed as far north as latitude 67°; and a female, killed at Fort Franklin on the 20th of May, contained several pretty large eggs nearly ready for exclusion. In summer it is by no means rare in the fur-countries: and, as it hunts frequently for its prey in the day time, is often seen. When disturbed, it flies low for a short distance, and then hides itself in the heart of a bush, from whence it is not easily driven. Its nest, formed of withered grass and moss, is placed on a dry spot of ground." This species frequents Hudsons's Bay, Labrador, and Newfoundland, in summer, and is found on the American continent in winter, as far south as Pennsylvania. Two specimens are said to have been brought from the Sandwich Isles, and Mr. Gould has seen examples from Brazil, and the Straits of Magellan.

The head of this species is small compared with that of Owls generally; the tufts, about three-quarters of an inch long, formed of three or four feathers, which can be elevated or depressed at pleasure; the beak is black; the irides golden yellow; the feathers radiating from around each eye, forming the facial disk, are dark, almost black at the base, but becoming lighter in colour and mixed with brown towards the end, those pointing in the direction of the beak hiding the cere; the facial disk surrounded by a whitish line or border; top of the head, neck, back, and wings, patched with very dark brown: the feathers edged with fawn colour; wing-coverts with a few roundish spots of yellowish white; wing-primaries pale reddish brown, barred with dark brown, and ending with speckled ash-grey; upper surface of tail-feathers buff colour, with five transverse bars of very dark brown; the chin white; all the under surface of the body pale buff, with longitudinal patches of blackish brown on the neck and breast, and streaked with the same colour on the belly and flanks; thighs, legs, and upper surface of the toes covered with short, uniform, hair-like, pale buff-coloured feathers; under surface of the toes naked; claws almost black, curved and sharp.

The whole length from fourteen to fifteen inches. Wings, when closed, reaching beyond the end of the tail. The females are larger than the males; but the differences in the plumage of the sexes are not very obvious.



THE WHITE, OR BARN OWL.

Strix flammea.

Strix flammea,	*White Owl,*	Penn. Brit. Zool. vol. i. p. 263.
,, ,,	,, ,,	Montagu, Ornith. Dict.
,, ,,	*Yellow* ,,	Bewick. Brit. Birds, vol. i. p. 65.
Aluco flammeus,	*Barn* ,,	Flem. Brit. An. p. 57.
Strix flammea,	*Barn, or White Owl,*	Selby, Brit. Ornith. vol. i. p. 99.
,, ,,	*White Owl,*	Jenyns, Brit. Vert. p. 92.
,, ,,	*Barn* ,,	Gould, Birds of Europe, pt. vii.
,, ,,	*Chouette effraie,*	Temm. Man. d'Ornith. vol. i. p. 91.

Strix. *Generic Characters.*—Head smooth, not furnished with tufts. Beak straight at the base, considerably curved towards the point ; cutting margin of the upper mandible nearly straight, under mandible notched. Nostrils oval, oblique. Facial disk large and complete. Auditory opening large, and furnished with an operculum. Wings long and ample; the second quill-feather generally the longest, the first and third equal in length. Legs long and slender, clothed with downy feathers to the junction of the toes, which are only furnished on the upper surface with a few hair-like feathers; claws long, curved, sharp, and grooved underneath.

Naturalists appear to be agreed that our well-known Barn Owl may be considered the type of the true Owls, and the old generic term *Strix*, is accordingly by most authors continued to it. Unlike the species last described, the Barn Owl is resident in this country throughout the year, and is so peculiar in the colouring of its plumage, and so generally diffused, that it is probably the best known of all the British species of Owls.

This White Owl inhabits churches, barns, old malting kilns, or deserted ruins of any sort, and also holes in decayed trees. If unmolested, the same haunts are frequented, either by parent birds or their offspring for many years in succession. As a constant destroyer of rats and mice, and that to a very considerable extent, the services performed by Barn Owls for the agriculturist have obtained for these birds toleration at least, while by some they are, as they deserve to be, strictly protected in return for benefits received.

Unless disturbed, these birds seldom leave their retreat during the day, and if the place of concealment be approached with caution, and a view of the bird obtained, it will generally be observed to have its eyes closed, as if asleep. About sunset the pair of Owls, particularly when they have young, issue forth in quest of food, and may be observed flapping gently along, searching lanes, hedge-rows, orchards, and small enclosures near out-buildings. In this irregular country, says White of Selborne, "we can stand on an eminence, and see them beat the fields over like a setting dog, and often drop down in the grass or corn."

They feed on young rats, mice, shrews, small birds, insects, &c. parts of all of which have been recognized at different times on examination of the rejected pellets, which are generally to be found in abundance near any favourite place of their resort. That the Barn Owl will sometimes capture fish is proved by a note in the Compendium of the Ornithology of Great Britain by the late Mr. John Atkinson of Leeds, which states that a gentleman residing in Yorkshire, and well acquainted with ornithology, having observed the scales of fishes in the nest of a pair, which had built near a lake on his premises, he was induced one moonlight night to watch their motions, when he was agreeably surprised to see one of them plunge into the water, and seize a perch, which it bore to its nest, whence the gentleman took it. This note, it appears, was supplied by Mr. Waterton of Walton Hall, in whom the Barn Owl has found a most able and philanthropic advocate.*

It is said of this Owl, that when satisfied it will hide the remainder of its meat, like a dog.

The Barn Owl lays from three to five eggs, which are oval and white, measuring one inch six lines in length, and one inch three lines in breadth. Young birds have been found in July, they have also been found in September, and Mr. Waterton, in his paper already referred to, mentions having found young Owls in the nest so late in the year as December. A short notice by Mr. Blyth in the Field Naturalist's Magazine, vol. i. page 187, serves to explain the circumstance of the occurrence of young Owls over a space of time so unusually long. "A nest of the Barn Owl last summer in this neighbourhood (Tooting) contained two eggs, and when these were hatched two more were laid, which latter were probably hatched by the warmth of the young birds; a third laying took place after the latter were hatched, and the nest at last contained six young Owls of three different ages, which were all reared." I have frequently been told by boys in the country that they had found eggs and young birds at the same time in the nest of the Barn Owl. The young, covered with a thick white down, remain in the nest a long time, and the first set of feathers, which, Mr. Blyth says, are not moulted till the second autumn, grow very slowly.

---

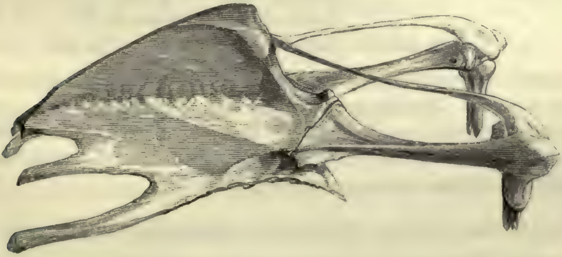
* Magazine of Natural History, vol. v. p. 9.

The Barn Owl screeches, but does not generally hoot.

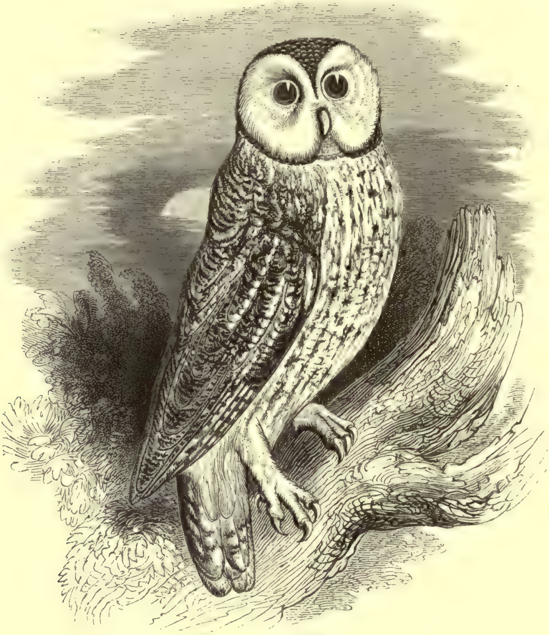
The Barn Owl is common in most, if not in all the counties of England; and, according to Mr. Thompson, it is also the most common Owl in Ireland. In Scotland it is less numerous, and this species appears to decrease in numbers as we proceed northward. A few are found in some of the Orkney Islands; Muller includes it among the birds of Denmark; but it does not appear to inhabit Sweden or Norway. Over the more temperate part of the European continent it is generally diffused, and its range southward extends in Africa even to the Cape of Good Hope. Sir William Jardine has received specimens from Madeira. According to M. Temminck and others, this bird also inhabits India and Japan. In North America our Barn Owl is found in the United States; but it is more thinly diffused, and it does not appear to visit the fur-countries of the North. The Yellow Owl of South America is considered to be a distinct species.

In an old male the beak is almost white; irides bluish black; facial disk stained with rust colour at the inner and lower part of each eye, the margin of the disk defined by the white feathers being tipped with brown; top of the head and the neck very pale buff, thinly spotted with black and white; back and wings darker buff speckled with grey, and spotted with black and white; upper surface of tail-feathers pale buff, with five transverse grey bars; all the under parts pure white; tarsi covered with short white hair-like feathers, a few of which are spread over the upper surface of the toes; the claws brown, the inner edge of that of the middle toe being slightly serrated. The wings reach beyond the end of the tail, and the edges of the wing and tail-feathers have the appearance of being worn, the fibres forming the web being of unequal length, and the wings of these birds therefore when moved in the air make very little or no noise. In some specimens, generally found on dissection to be females or young males, the under surface of the body is fawn colour. The whole length of the bird is about fourteen inches.

The vignette below represents the actual size and form of the sternum or breast-bone of the Tawny Owl, the species figured on the next page, to be contrasted with the same part of the Peregrine Falcon at page 113. It will be observed that the bones of the Owl are comparatively deficient in surface and strength: the keel has but little depth, the sides are narrow, while the forked bone, which in the Falcons is circular, broad, and strong, will be found in this Owl, and in all the species of Owls, to be angular, slender, and weak. The powers of flight are diminished in proportion.



RAPTORES. *STRIGIDÆ.*



THE TAWNY OWL.

Syrnium stridula.

Strix stridula,	*Tawny Owl,*	Penn. Brit. Zool. vol. i. p. 266.
" "	" "	Mont. Ornith. Dict.
" "	" "	Bewick, Brit. Birds, vol. i. p. 67.
" "	*Ivy* "	Flem. Brit. An. p. 57.
Ulula "	*Tawny* "	Selby, Brit. Ornith. vol. i. p. 102.
Syrnium aluco	" "	Jenyns, Brit. Vert. p. 93.
" "	" "	Gould, Birds of Europe, pt. v.
" "	*Chouette hulotte,*	Temm. Man. d'Ornith. vol. i p. 89.

Syrnium. *Generic Characters.*—The head without tufts. Bill slightly bending from the base. Nostrils large. Facial disk large and complete; auditory opening large, defended by an operculum. Wings short and rounded; the first quill-feather very short, the fourth the longest. Tail long, concave beneath. Legs and toes feathered; claws curved, long, and sharp.

Most of the various systematic names by which this Owl has been designated are here brought together in one view, as referring to the same bird; differences observed in the plumage, some specimens being reddish brown or tawny, while others were grey, had led to a belief in the existence of two distinct species.

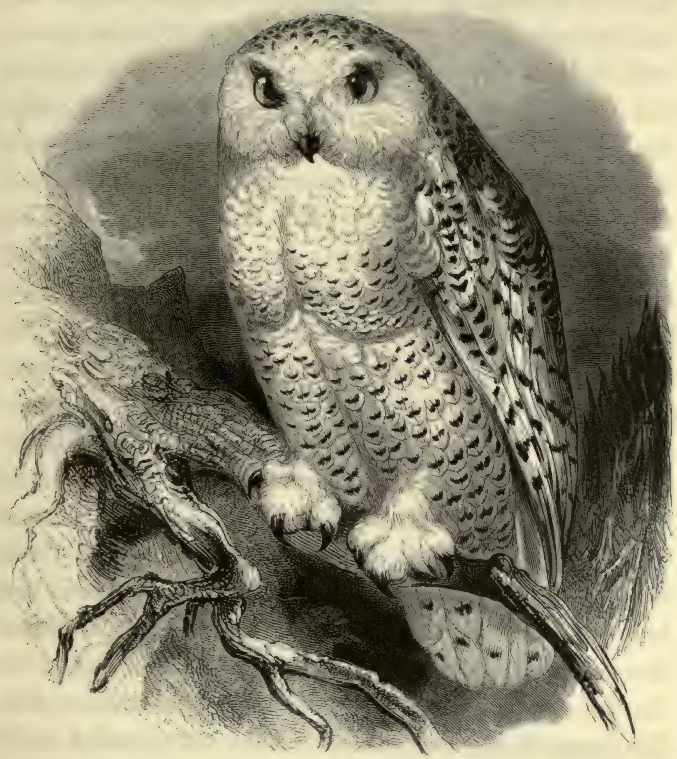
The Tawny Owl is a common bird in most well-wooded districts, and is strictly nocturnal in its habits, seldom moving or leaving its place of concealment during the day, and appears, more than any other species of Owl, to be incommoded by bright light. It inhabits thick woods, or strong plantations of evergreens, and at nightfall issues forth to seek its food, sometimes visiting small enclosures about farm-houses, at others taking a wider range over the neighbouring fields. It feeds indiscriminately on leverets, young rabbits, moles, rats, mice, birds, frogs, and insects. Several writers have proved that this Owl feeds occasionally on fish, and that it is able to catch either those species that swim near the surface in deep water, or the bullhead and loach, that are to be found among stones in the shallowest parts of brooks.

The eggs of this species are large compared with those of either of the three Owls last described. They are smooth and white, measuring one inch ten lines in length, by one inch six lines in breadth. These, to the number of three or four, are usually deposited in a hole in a tree, and, according to Mr. Jenyns, are hatched in April. For a considerable time the young, covered with a greyish white down, are fed in the nest; they afterwards perch among the branches of trees near the nest, where the parent birds still continue to feed them. The young of this species of Owl are said to be more easily reared than others, being much less choice in the quality of their food. The note of this Owl is a loud and melancholy hoot, most frequently heard in the evening.

The Tawny Owl may be traced through the western counties of England, but has not been recognised by practical ornithologists as existing in Ireland. It occurs also in the northern counties of England, but is more rare in Scotland. Mr. Low includes it among the birds of Orkney that are seen in summer, but not in the winter. It inhabits Scandinavia, Lapland, Russia, the wooded countries of the European continent, and is found in Spain, Italy, Sicily, and Algeria; it was seen by Mr. Strickland as far to the southward and eastward as Smyrna. M. Temminck includes this Owl in his Catalogue of the Birds of Japan.

The adult male has the head large; the beak whitish horn colour: the eyes large and full; the irides dark blue, almost black: the facial disk greyish white, defined by a dark brown marginal line; top of the head, neck, back, and wings, a mixture of ash grey, mottled with two shades of brown; a descending line of white spots at the edge of the scapulars, and another on the edge of the wing-coverts; wing-primaries barred with dull white and dark brown, the wings not reaching to the middle of the tail; upper surface of the tail-feathers barred with two shades of brown, the central pair of feathers being the most uniform in colour. The under surface of the body greyish white, mottled and streaked longitudinally with pale and dark brown; under tail-coverts white; under surface of tail-feathers greyish white, barred transversely with reddish brown; legs and toes covered with short greyish white feathers; claws horn white at the base, becoming darker towards the tip. The whole length about fifteen inches.

The females are larger, and much more ferruginous or tawny in the general colour of their plumage. Young males are for a considerable time, probably till their second autumn, similar in colour to the females.



THE SNOWY OWL.

Surnia nyctea.

Strix nyctea,	*Snowy Owl,*	Montagu, Ornith. Dict. Suppt.
,, ,,	,, ,,	Bewick, Brit. Birds, vol i. p. 58.
,, ,,	,, ,,	Fleming, Brit. An. p. 58.
Surnia ,,	,, ,,	Selby, Brit. Ornith. vol. i. p. 95.
Noctua ,,	,, ,,	Jenyns, Brit. Vert. p. 93.
Surnia ,,	,, ,,	Gould, Birds of Europe, pt. xv.
Strix ,,	*Chouette Harfang,*	Temm. Man. d'Ornith. vol. i. p. 82.

Surnia. *Generic Characters.*—Heads not furnished with tufts of feathers. Beak curved from the base ; nostrils large, oval ; cere small. Facial disk incomplete. Auditory opening small. Wings of moderate size ; the third quill-feather generally the longest. Tail rather long. Legs and toes thickly covered with feathers ; claws long, curved, and sharp.

This beautiful species of Owl, originally described by Linneus in his *Fauna Suecica*, was first made known as a British bird by Mr. William Bullock in 1812, in the summer of which year that indefatigable collector on visiting the islands of Orkney and Shetland was told that such a bird had been seen on the links or rabbit-warren of one of the islands near the sea-shore, and soon after Mr. Bullock obtained sight of it himself. This specimen, however, was not procured on that occasion; but in the month of September following he had the gratification of receiving one which had been killed a few weeks before by Mr. L. Edmonston in Unst, the most northerly of the Shetland isles. Mr. Bullock adds, that he had not the smallest doubt the Snowy Owl at that time remained the whole year in the mountainous precipices both of that island, and also of the island of Yell, in the immediate vicinity. "They are seen there," he said, "at the end of summer, in company with their young, three or four together: the latter are then brown. Their flight, which I had several opportunities of observing, was more light and buoyant than any of the Hawks; but not so much so as our common Barn Owl. They prey by day on various animals; one wounded on the Isle of Balta disgorged a young rabbit whole; and that now in my possession had in its stomach a Sandpiper, with its plumage entire."

Recent visitors to the Shetland Islands believe that the Snowy Owl is only now occasionally to be seen there in winter. In that season of the year 1812, a fine specimen was shot at Elsdon in Northumberland. Since that period various examples have been killed: one in Norfolk in the year 1814, a second in the same county in 1820, two in Northumberland in 1823. In May 1835, Dr. Neill of Canonmills, near Edinburgh, made the following communication to the conductor of the Magazine of Natural

History, vol. viii. p. 508. "Last week I received from Mr. Scarth, Sanda, Orkney, a living specimen of the Snowy Owl. This was not a native specimen, but evidently a bird of last year, in immature plumage, but whose expanded wings extend four feet in width. This bird arrived in Orkney during a strong north-west gale, with hail and sleet, along with flocks of wild Swans, Golden-eyes, snow-flakes, &c.; indicating an Icelandic or Greenland origin."

A notice of one taken still more recently has appeared in several periodicals devoted to Natural History. On the 13th of February last (1837), a fine male Snowy Owl was shot three miles below Selby-on-the-Moor, Yorkshire, where it had been observed by a miller, at a mill adjoining, for a day or two previous. The moor is well stocked with rabbits, and the Owl was most probably preying upon them: it appeared very shy, and when pinioned by the shot was extremely fierce.* Several specimens have also been killed in different parts of Ireland, the particulars of which are recorded by Mr. Thompson of Belfast, in the second volume of the Magazine just quoted.

The Snowy Owl inhabits Sweden, Norway, Lapland, and the North of Europe generally. The Swedish name of *Harfang* is bestowed upon it in consequence of its apparent partiality to feeding upon hares. It inhabits also Iceland and Greenland. Several pairs were seen during the summer months on the different islands of the Polar sea by the Arctic voyagers from this country; but the birds being very wary, and the country affording little shelter to the sportsman, only a single individual or two were killed. A specimen was obtained by Mr. King during Captain Back's last journey, and others were seen. Dr. Richardson, who passed seven summers and five winters in the fur-countries of North America, east of the Rocky Mountains, thus describes its habits in that country:—"It hunts in the day; and, indeed, unless it could do so, it would be unfit to pass the summer within the Arctic Circle. When seen on the barren grounds, it was generally squatting on the earth, and, if put up, it alighted again after a short flight; but was always so wary as to be approached with great difficulty. In the wooded districts it shows less caution; and, according to Hearne, has been known to watch the Grouse-shooters a whole day, for the purpose of sharing in the spoil. On such occasions, it perches on a high tree, and when a bird is shot, skims down and carries it off before the sportsman can get near it. It preys on lemmings, hares, and birds, particularly the Willow Grouse and Ptarmigan. Mr. Hutchins says that it eats carrion; and Wilson informs us that it is a dexterous fisher, grasping its finny prey with an instantaneous stroke of the foot as it sails along near the surface of the water, or sits on a stone in a shallow stream. I have seen it pursue the American hare on the wing, making repeated strokes at the animal with its foot: but on that occasion, through the intervention of an Indian, it was driven from its quarry. It makes its nest on the ground, and lays three or four white eggs, of which only two are in general hatched."

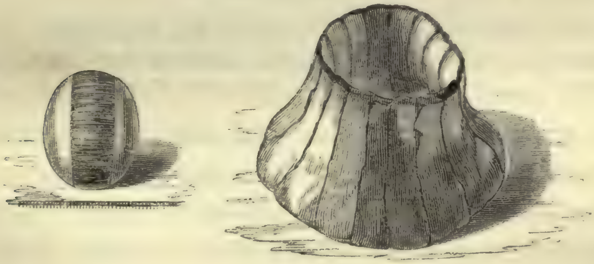
---

* Magazine of Zoology and Botany, vol. ii. p. 93.

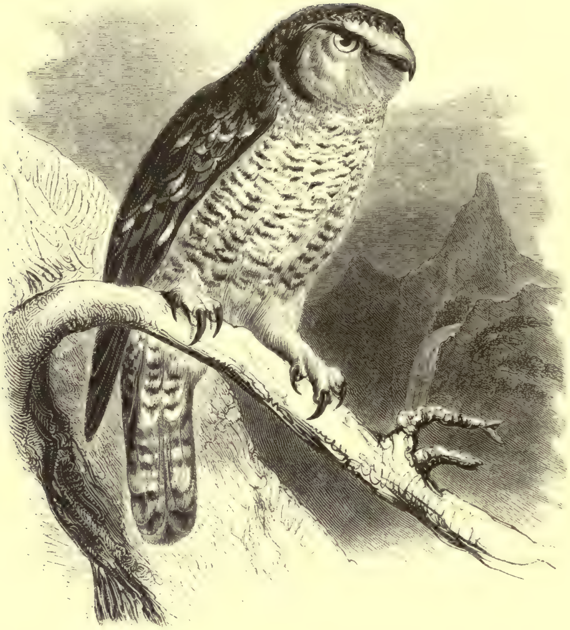
To return to the localities visited by this bird in Europe, I may add that, in addition to those already named, this bird has sometimes been seen in Germany, but not in France, and, according to M. Temminck, only once in Holland, and that a young bird, which made its appearance in the winter of 1802.

As in the adult Gyr-falcon, already described, the ground colour of the plumage in the adult Snowy Owl is pure white, more or less spotted and barred with dark umber brown, according to the age of the individual; these dark marks becoming smaller and smaller every succeeding year, until in very old individuals from high northern latitudes the whole plumage becomes pure white, without any spots whatever. The brown mark when present is situated towards the end of the feather bearing it; and upon the feathers of the under surface these markings are semilunar in shape, while those on the feathers covering the back and wings are more linear. The feathers forming the incomplete facial disk, those of the upper part of the breast, and also the downy feathers defending the legs and toes, are pure white: the beak and claws are black; both are partially hidden by feathers; the latter are long, curved, and very sharp. The irides are bright orange yellow. The whole length of the Snowy Owl is from twenty-two to twenty-seven inches, the difference depending on the sex: the females are much the larger of the two. M. Temminck says the young birds are covered with brown down, and their first feathers are also light brown.

The vignette below represents the crystalline lens and the bony ring of the eye in this bird, which may be compared with those of the Eagle at page 19, and both are referred to at page 15.



RAPTORES. *STRIGIDÆ.*



THE HAWK OWL.

Surnia funerea.

Noctua funerea,		*Canada Owl,*	**Jenyns**, Brit. Vert. p. 526.
Surnia	,,	*Hawk Owl,*	**Gould**, Birds of Europe, pt. x.
Strix	,,	*Chouette caparacoch,*	**Temm.** Man. d'Ornith. vol. i. p. 86.

An Owl of this species, preserved in the collection of Dr. Burkitt of Waterford, was taken on board a collier, a few miles off the coast of Cornwall, in March 1830, being at the time in so exhausted a state as to allow itself to be captured by the hand. On the arrival of the vessel at Waterford, whither she was bound, the bird was given to a friend of Dr. Burkitt, with whom it lived for a few weeks, and then came into his possession. The very circumstantial account of the capture of this bird given by Captain Stacey of the collier leaves no doubt of its accuracy. Such was the account given to the Zoological Society in June 1835, by Mr. Thompson of Belfast, of the capture of this Owl, as recorded in the Proceedings of that Society, on the evening when the specimen was exhibited. This bird is an inhabitant of Denmark, Norway, Sweden, and other parts of the North of Europe; it is not unfrequently seen in Germany, and even in France; it is an inhabitant also of great part of North America. Edwards long ago described and figured this species under the name of Hawk Owl, from examples received from Hudson's Bay; and I have followed Mr. Gould in retaining for this species the English name of Hawk Owl, as originally bestowed upon it by our countryman Edwards.

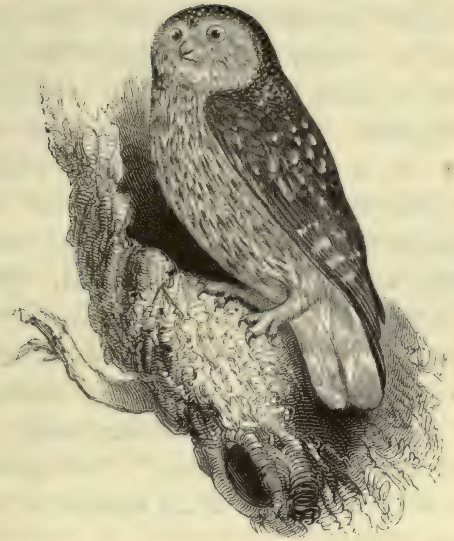
The most recent account of the habits of this species has been supplied in the *Fauna Boreali-Americana*, by Dr. Richardson and Mr. Swainson, and I hope I am not exceeding privilege in availing myself of part of it.

"This Owl remains all the year in high northern latitudes in America, and is rarely seen so far south as Pennsylvania, and then only in severe winters. Wilson saw only two specimens in the United States. It is a common species throughout the fur-countries, from Hudson's Bay to the Pacific, and is more frequently killed than any other by the hunters,—which may be partly attributed to its boldness, and its habit of flying about by day. In the summer season it feeds principally on mice and insects; but in the snow-clad regions, which it frequents in the winter, neither of these are to be procured, and it then preys mostly on Ptarmigan. It is a constant attendant on the flocks of Ptarmigan in their spring migrations to the northward. It builds its nest on a tree of sticks, grass, and feathers, and lays two white eggs. When the hunters are shooting grouse, this bird is occasionally attracted by the report of the gun, and is often bold enough, on a bird being killed, to pounce down upon it, though it may be unable from its size to carry it off. It is also known to hover round the fires made by the natives at night."

The following description is from a specimen killed in Lapland, and presented to the Museum of the Zoological Society by Captain Everett:—The beak is white; the irides straw-yellow; facial disk dull white, bounded on the sides by a semilunar dark purplish brown patch extending from the ears downwards; the head, back of the neck, and upper part of the shoulders, mottled with dusky black and dull white; back and wings dark umber brown; lower part of the back barred with dull white; tertials elongated, loose, and downy in texture, covering great part of the wing, and barred alternately with dusky brown and white; upper surface of tail-feathers dusky brown, with six or seven narrow bars of dull white, and a broader terminal band of the same colour. Chin dusky; throat dull white; across the upper part of the breast a broad band of dull white; breast, belly, and under tail-coverts, dull white, with numerous narrow transverse bars of dusky brown; under surface of tail-feathers barred alternately with greyish brown and dull white; the tail long; tarsi and toes covered with short feathers of greyish white; claws white at the base, tipped with bluish black.

The whole length of the bird is about seventeen inches.

The female differs from the male in being somewhat larger in size, and the plumage is lighter in colour.



THE LITTLE OWL.

Noctua passerina.

Strix	*passerina,*	*Little Owl,*	Penn. Brit. Zool. vol. i. p. 270.
„	„	„ „	Montagu, Ornith. Dict.
„	„	„ „	Bewick, Brit. Birds, vol. i. p. 69.
„	„	„ „	Flem. Brit. An. p. 58.
Noctua	„	*Little Night Owl,*	Selby, Brit. Ornith. vol. i. p. 107.
„	„	„ „ „	Jenyns, Brit. Vert. p. 94.
„	*nudipes,*	„ „ „	Gould, Birds of Europe, pt. xii.
Strix	*passerina,*	*Chouette chevêche,*	Temm. Man. d'Ornith. vol. i. p. 92.

Noctua. *Generic Characters.*—Head not furnished with tufts of feathers. Beak curved and bending from the base ; cere short ; nostrils oval. Auditory opening large ; facial disk not well defined. Wings large ; the third and fourth quill-feathers nearly equal in length. Legs and toes covered with feathers. Claws curved and sharp.

This Little Owl, and that which is next to follow, can only be considered as occasional visitors to this country, though both have now been taken several times, and most of those instances will be here mentioned. There is reason however, to believe that from the general similarity in appearance of these two small Owls, they have been frequently mistaken the one for the other. The specific distinctions will be pointed out. The Little Owl is strictly nocturnal in its habits, but towards the evening becomes active and vigilant. Bechstein, in his Natural History of Cage Birds,—for a published translation of which we are indebted to Mr. Rennie,—says, "In its wild state this small species of Owl frequents old buildings, towers, and church walls, where its nest is also found. The female lays two white eggs of a short oval form, one inch four lines in length by one inch one line in breadth. The male takes his turn to sit upon the eggs during incubation; and the young ones may be very easily reared on fresh meat, particularly on Pigeons." This species is very frequently exposed for sale in the markets of Germany, Holland, and France.

In a wild state it feeds on mice, bats, small birds, which it takes from the roost, and insects.

"In a cage," according to Bechstein, "it may be kept for some time in good health, if fed on dried mutton: the skin, fat, and bones must be removed, and the meat left to soak in water for two days before it is eaten. Three quarters of an ounce a day of this meat dried will be sufficient, particularly if now and then some mice or small birds be given it, which it swallows, feathers and all: it can devour as many as five mice at a meal. It begins to wake up at about two in the afternoon, and then becomes very lively, and soon wants its food. If great care be not taken sometimes to give it mice or birds, the fur and feathers of which cleanse the stomach, it will soon die of decline. It is easily captured when the place of its retreat during the day is discovered, by placing a net in the form of a bag over the mouth of the hole, for the bird will by this means entrap itself when endeavouring to come out for the evening. It is much used on the Continent as a decoy to entrap small birds." M. Vieillot says it is seldom found in forests.

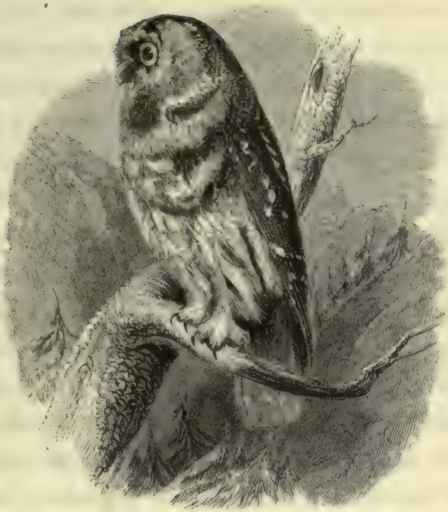
The actions of a specimen kept for more than two years by Mr. Leadbeater of Brewer-street were singularly grotesque and amusing.

Edwards drew his figure of this Little Owl, plate 228, from a specimen caught alive in a chimney in London; and a second example was taken about the same time in a similar situation, in the parish of Lambeth. Scopoli says it builds in chimneys in Carniola. Mr. Rennie, in a note to a recent edition of White's Selborne, says, "I recollect seeing in Wiltshire the remains of a specimen of the rare Sparrow-Owl, *Strix passerina*, nailed up to a barn-door."—*Page* 34. Two specimens, according to Dr. Moore, have occurred in Devonshire: Montagu has also mentioned one in the same county. My friend Mr. T. C. Eyton sent me a notice of one taken near Bristol; Dr. Hastings mentions one instance of the occurrence of this bird in Worcestershire; and Pennant speaks of one taken in Flintshire. In a direction north of London, Mr. Hunt of Norwich, in his British Ornithology, says, "We recollect a nest of these birds being taken at no great distance from Norwich;" and Mr. Paget, in the Sketch of the Natural History of Yarmouth, mentions two specimens as well authenticated. The Little Owl has occurred in Yorkshire; and the woodcut in Mr. Bewick's work was taken from a drawing of a specimen shot at Widrington in Northumberland, in January 1813. M. Temminck says this species does not go beyond the 55th degree of North latitude. It is common in Germany and Holland, visits Spain and the Morea, and, according to Mr. Strickland, is common in the Levant.

The beak is yellowish white; the irides very pale straw colour; feathers of the facial disk greyish white, passing into brown on the outer side of each eye; chin, and sides of the neck, below the ears, nearly white; top of the head and neck clove brown, with numerous spots of greyish white; the back and wings clove brown, with roundish white spots arranged in several lines on the scapulars and wing-coverts, and varied with other white spots which are less distinct, each brown feather having a white spot, which is partly concealed by the brown end of the feather over it; wing-primaries umber brown, barred with yellow brown or wood brown: the first quill-feather short; the second and fifth longer, and equal in length; the third and fourth the longest, and also equal: upper surface of tail-feathers clove brown, barred with pale wood brown; upper part of the breast with an indistinct brown and white transverse band, below greyish white with longitudinal spots of clove brown; under tail-coverts white; under surface of tail-feathers dull greyish brown, barred with yellow brown: legs very long, covered with close short white hair-like feathers,—from which circumstance this species has received the name of *nudipes* from M. Nilsson; the toes are very slightly covered; the claws sharp and black.

The whole length of this bird is about eight inches and a half. The females are rather larger than the males, and the general colour of their plumage is paler.

According to Bechstein, in the young birds before the first moulting, "the head is of a soft reddish grey, clouded with white. The large round spots on the back become gradually more marked; and the reddish white of the under part by degrees acquires long streaks of brown on the breast and sides."



TENGMALM'S OWL.

Noctua Tengmalmi.

Noctua	*Tengmalmi,*	*Tengmalm's*	*Owl,*	SELBY, Brit. Ornith. vol. i. p. 105.
”	”	”	”	JENYNS, Brit. Vert. p. 94.
Syrnium	”	”	”	EYTON, Rare Brit. Birds, p. 90.
Noctua	”	”	”	GOULD, Birds of Europe, pt. xviii.
Strix	”	*Chouette*	*Tengmalm,*	TEMM. Man. d'Ornith. vol. i. p. 94.

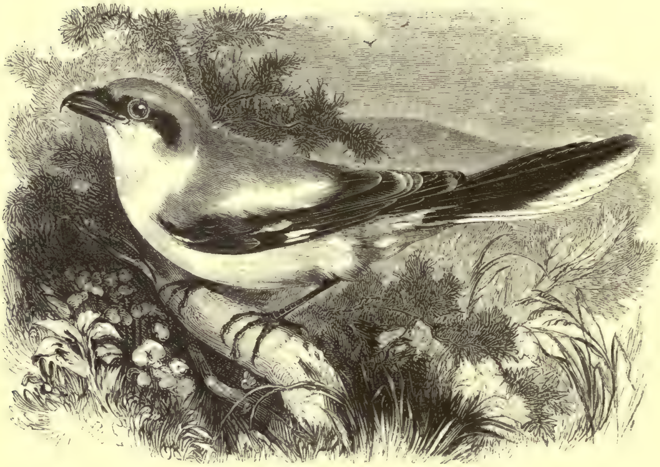
THIS pretty marked Owl was clearly distinguished from the *Strix passerina* of authors by Dr. Tengmalm, an able Ornithologist, who resided near Stockholm, and who applied to it the name of *Strix noctua ;* but this name appears to have been changed by Gmelin to that of *Strix Tengmalmi,* in compliment to its early describer.

Though similar in size and general appearance to the Little Owl last figured, it will at once be distinguished on close examination by the more thick, and downy character of the plumage, and by the length and abundance of the feathers covering its short legs and toes, indicating the natural defence against a low temperature afforded to a bird that is an inhabitant of high northern latitudes. It has no doubt been frequently mistaken for the Little Owl, and probably obtained in this country more frequently than it has been recorded; since, according to M. Temminck, the Little Owl figured by Pennant in the folio plates illustrating the first edition of his British Zoology, though called *passerina*, is in reality a female of *Tengmalmi*. Mr. Selby has in his collection a specimen killed at Morpeth in Northumberland, in 1812. In 1836, a specimen recently shot was purchased in a poulterer's shop in London; and in May of the same year, Mr. John Leadbeater of Brewer-street received a specimen for preservation which had been shot in Kent. There can be no doubt, therefore, of the propriety of including this species in a History of British Birds.

This little Owl inhabits thick forests in Norway, Sweden, Russia, and Germany; occasionally in France, and the northern parts of Italy; but is in no country so abundant as in North America, where, according to Dr. Richardson, it has a wide range, including all the woody country from Great Slave Lake to the United States, but is most plentiful on the banks of the Saskatchewan. "It is strictly nocturnal in its habits, and is so much dazzled by the light of the sun, when it accidentally wanders abroad in the day, as to become stupid; and it may then be easily caught by the hand. Its cry in the night is a single melancholy note, repeated at intervals of a minute or two; and it is one of the superstitious practices of the Indians to whistle when they hear it. If the bird is silent when thus challenged, the speedy death of the inquirer is augured; hence its Cree appellation of Death-bird." According to Mr. Hutchins, it builds a nest of grass half way up a pine-tree, and lays two eggs in the month of May. The eggs are rather elongated and white, one inch four lines in length, and eleven lines in breadth. The food of this small Owl consists of mice and large insects.

The beak is yellowish white; the irides pale straw yellow; the top of the head, nape, back and wings, chocolate brown, with minute white spots on the top of the head, and larger white patches on the back and wing-coverts; some smaller white spots on the lower or distal part of the outer web of the wing-feathers are arranged so as to give the appearance of bands; tail-feathers clove brown, with soiled white spots forming interrupted bars; tail-feathers extending nearly an inch beyond the ends of the wings. Facial disk soiled white; round the eyes a dark ring forming a band, which is broadest on the inner side; the ends of the feathers extending over and hiding the base and sides of the beak: neck, breast, and belly, greyish white, indistinctly barred and spotted with clove brown; under tail-coverts dull white, without spots; under surface of tail-feathers greyish white, the light-coloured spots of the upper surface appearing through; tarsi and toes thickly covered with downy feathers of soiled white, slightly speckled with brown; claws black, long, curved, and sharp. The whole length of the bird is from eight and a half to nine inches.

INSESSORES. *LANIADÆ.*
DENTIROSTRES.



GREAT GREY SHRIKE.

Lanius excubitor.

Lanius	*excubitor,*	*Great*	*Shrike,*	Penn. Brit. Zool. vol. i. p. 272.
"	"	*Cinereous*	"	Montagu, Ornith. Dict.
"	"	*Ash-coloured*	"	Bewick, Brit. Birds, vol. i. p. 75.
"	"	*Cinereous*	"	Flem. Brit. An. p. 62.
"	"	*Great*	"	Selby, Brit. Ornith. vol. i. p. 148.
"	"	*Cinereous*	"	Jenyns, Brit. Vert. p. 95.
"	"	*Great*	"	Gould, Birds of Europe, pt. ii.
"	"	*Pie-grièche grise,*		Temm. Man. d'Ornith. vol. i. p. 142.

Lanius. *Generic characters.*—Bill short, thick and straight at the base, compressed; upper mandible hooked at the point, with a prominent tooth; base of the bill beset with hairs directed forwards. Nostrils basal, lateral, oval. Wings of moderate size; the first quill-feather shorter than the second, the third the longest. Tarsus longer than the middle toe; feet with three toes before, one behind; the outer united at its base to the middle toe.

The second Order of Birds, the Insessores, or Perching Birds, includes a much greater number of species than either of the other four primary divisions or Orders of the

Class. They are distinguished as an Order by possessing the largest volume of brain in proportion to their size, and a corresponding degree of intelligence; the vocal organs present the highest degree of perfection to be found in the class, and several of the species are capable of imitating the sounds of the human voice: by the perfection of the foot it is adapted to the greatest variety of purposes, and the hind toe is always present, and always articulated on the same level or plane with the fore-toes.

The birds included in this Order are again divided; and those now about to be described belong to the division or tribe called DENTIROSTRES, on account of the distinct tooth or notch near the extremity of one or both of the mandibles.

The Great Grey Shrike, the largest of the British species of the genus *Lanius*, is only an occasional visitor to this country, and is generally obtained between autumn and spring. On two occasions it has been seen in Essex during summer, by observers who know this bird well; and also in Burnt-ash Lane, near Lee in Kent, by Mr. Gray; yet it has not, that I am aware, been ever known to breed here,—though the large size of the nest and the variable colour and markings of the eggs of the Red-backed Shrike have in some instances led to the belief that they belonged to the Great Shrike. A pair of Grey Shrikes were frequently seen together in a fir plantation in Northumberland in the spring of 1831; but on search being made later in the season, neither the birds nor any nest could be found, and by far the greater number of British killed specimens have been obtained during the winter season.

The Grey Shrike feeds upon mice, shrews, small birds, frogs, lizards, and large insects. After having killed its prey, it fixes the body in a forked branch, or upon a sharp thorn, the more readily to pull off small pieces from it. It is from this habit of killing and hanging up their meat, which is observed also in other Shrikes, that they have been generally called Butcher Birds.* Part of a letter from my friend Mr. Henry Doubleday of Epping, in reference to the Grey Shrike, is as follows: "An old bird of this species, taken near Norwich in October 1835, lived in my possession twelve months. It became very tame, and would readily take its food from my hands. When a bird was given it, it invariably broke the skull, and generally ate the head first. It sometimes held the bird in its claws, and pulled it to pieces in the manner of Hawks,—but seemed to prefer forcing part of it through the wires, then pulling at it. It always hung what it could not eat up on the sides of the cage. It would often eat three small birds in a day. In the spring it was very noisy, one of its notes a little resembling the cry of the Kestrel." Mr. Selby, who has seen the Grey Shrike when alive in its wild state, says, "its flight is interrupted, being performed by jerks; and when perched, the tail is kept in constant motion." It has considerable power of voice, and sufficient flexibility to enable it to imitate the notes of some of the smaller birds; and this power it is said to exercise as a decoy, the more easily to obtain food by deceiving small birds. A writer in the Naturalist, says, "My first acquaintance with the Butcher Bird was occasioned by hearing notes not entirely familiar to me, though much resembling those of the Stonechat. Following the sound, I soon discovered the utterer; and while listening, to my surprise, the original notes were discarded, and others adopted of a softer and more melodious character, never, however, prolonged to anything like a continuous song. Its grave ash-coloured garb, with its peculiar black patch on the cheek, soon convinced me that my unknown friend was the Butcher Bird."

---

* *Lanius*, a butcher, *lanio*, to cut or tear in pieces.

This bird is used by falconers abroad during autumn and winter when trapping Falcons. The Shrike is fastened to the ground, and, by screaming loudly, gives notice to the Falconer, who is concealed, of the approach of a Hawk. It was on this account, therefore, called *excubitor*,—the sentinel. It frequents groves and forests, and builds on trees at some distance from the ground, making a nest of bents, roots, and moss, lined with down and wool. The eggs are from four to six in number, of a bluish or greyish white colour, spotted over the large end with two shades of light brown and ash. The length of the egg one inch one line, by nine lines and a half in breadth.

The Grey Shrike has been obtained in several southern and western counties,—in Surrey, Sussex, Wiltshire, Dorsetshire, Devonshire, Worcestershire, and Cheshire; and I am informed by Mr. Thompson of Belfast, that it has occurred in one or two instances in the North of Ireland. A specimen shot near Belfast is in the collection of Dr. J. D. Marshall. North of London, it has been killed in Hertfordshire, Suffolk, Cambridgeshire, Norfolk, Yorkshire, Cumberland, Northumberland, and Durham. No Shrikes appear to have been seen either in the islands of Orkney or Shetland; but the Grey Shrike is included among the birds of Denmark, Norway, Sweden, Lapland, Russia, and Germany. In Holland it is rare; but it is rather a common bird in France, and remains there throughout the year, frequenting woods in summer, and open plains in winter. It is an inhabitant of Spain, Provence, and Italy. It is found also in Sicily, Malta, Fezzan, and eastward as far as Erzeroom.

In the old male, the upper mandible is black, with a projecting tooth near the point of the beak, which is considerably curved; under mandible yellowish brown at the base, becoming brownish black at the end; the nostrils hid by black hairs: the lore, or space between the base of the beak and the eye, black; the same colour passing by a narrower band under the eye, and then expanding, forms a black oval patch which covers the orifice of the ears: the irides very dark brown; the head, neck, back, wing and tail-coverts, pearl grey; the scapulars tipped with white; wing-primaries and secondaries black, with a white bar near the base of each feather, which, when the wing is closed, form two white spots; the secondaries are also tipped with white: the upper surface of the four central feathers of the tail black, the next feather on each side tipped with white, the next one-fourth white, the next one-third white, the next or outer tail-feathers almost wholly white; the tail graduated. The chin, throat, sides of the neck, the breast, belly, flanks, thighs, and under tail-coverts, pure white; under wing-coverts white; under surface of wing-primaries dusky grey, inclining to slate grey; under surface of tail-feathers less pure in colour than the upper surface, but equally defined in the markings; the legs, toes, and claws, black.

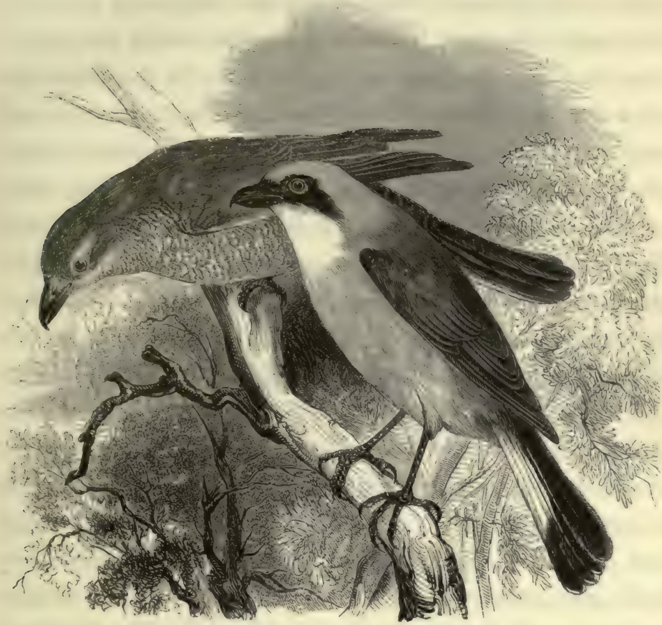
Females resemble the males, except that the colours of the plumage are not so pure, and the dull white of the breast is marked with numerous greyish semilunar lines.

Young males resemble the females.

The whole length of the Grey Shrike is ten inches. Length of wing from the wrist-joint, or carpus, to the end of the longest primary, four inches and three-quarters; first wing-feather only half as long as the second; the second shorter than the third, fourth, or fifth, which are nearly equal, and the longest in the wing; the sixth but very little longer than the second.

INSESSORES.
DENTIROSTRES.

LANIADÆ.



RED-BACKED SHRIKE.

Lanius collurio.

Lanius collurio,	*Red-backed Shrike,*	Penn. Brit. Zool. vol. i. p. 272.
" "	" "	Montagu, Ornith. Dict.
" "	" "	Bewick, Brit. Birds, vol. i. p. 75.
" "	" "	Flem. Brit. An. p. 62.
" "	" "	Selby, Brit. Ornith. vol. i. p. 150.
" "	" "	Jenyns, Brit. Vert. p. 96.
" "	" "	Gould, Birds of Europe, pt. x.
" "	*Pie-grieche grise,*	Temm. Man. d'Ornith. vol. i. p. 142.

The lower figure of the engraving represents the male, and the upper figure the female of the Red-backed Shrike, another species of Butcher Bird, very similar in its habits to the Grey Shrike, last described, but is much more common, and visits this country only in the summer. It arrives in Italy from Africa about the beginning of April, and reaches England by the end of that month or early in May, quitting it again in September. It frequents the sides of woods and high hedge-rows, generally in pairs, and may frequently be seen perched on the uppermost branch of an isolated bush on the look-out for prey. The males occasionally make a chirping noise, not unlike the note of the Sparrow; Montagu mentions having heard them give utterance to a sort of song; and M. Vieillot says they imitate the voice of small birds. The food of the Red-backed Shrike is mice and probably shrews, small birds, and various insects, particularly the common May-chaffer. Its inclination to attack and its power of destroying little birds has been doubted; but it has been seen to kill a bird as large as a Finch, is not unfrequently caught in the clap-nets of London bird-catchers, having struck at their decoy birds, and is recorded in the Linnean Transactions as having been seen in pursuit of a Blackbird.* Mr. Hewitson says, "Seeing a Red-backed Shrike busy in a hedge, I found, upon approaching it, a small bird, upon which it had been operating, firmly fixed upon a blunt thorn, its head was torn off, and the body entirely plucked."

Mr. Blyth has observed, that where food is abundant, this Shrike leaves the body and hard parts of insects thus impaled, and only eats the softer abdomen. Portions of fur or feathers, and other indigestible parts, when swallowed, are afterwards ejected at the mouth by the Shrikes in the same manner as by Falcons and Owls.

The nest made by this species is very large in proportion to the size of the bird, frequently measuring from six to seven inches diameter ; it is usually placed rather high in a strong hedge or thick bush ; the nest, shaped like a cup, is generally formed of coarse stalks of plants on the outside, with some moss and fibrous roots within, and lined with bents and a few hairs. The eggs are four or five in number, about eleven lines long by eight lines in breadth, generally uniform in size, but very variable in colour, sometimes pale bluish white, spotted with hair-brown and ash-grey, the spots confined to the larger end of the egg, and frequently forming a band ; occasionally they are found of a greenish white, with darker spots ; and in many instances the eggs are pale reddish white, spotted with two shades of darker red and reddish brown.—Three eggs are exceedingly well represented in Mr. W. C. Hewitson's work.

---

* Vol. xv. p. 14.

The parent birds are clamorous over their young brood, and the little family keep together as long as they remain in this country.

The Red-backed Shrike is common about London, and in most, if not all, the southern and western counties of England and Wales, going northward from thence as far as Cumberland ; but there, as observed by Dr. Heysham, it is rare. It has not, I believe, been observed by Ornithologists in any part of Ireland. North of London, on the east coast, it is found in Essex, Suffolk, Norfolk, and Yorkshire ; but occasionally only as far north as Northumberland and the south-eastern part of Durham. It has not, that I am aware, been noticed in Scotland or its islands ; yet it visits Denmark, Norway, Sweden, and Russia. From thence southward, it is found in Germany, France, Spain, Provence, Italy, Corfu, Sicily, and Malta. Specimens were sent by Keith Abbot, Esq. to the Zoological Society from Trebizond ; it also inhabits Egypt and North Africa, is included by Le Vaillant among the birds of

Senegal and the Cape of Good Hope, from which latter country specimens have also been recently brought by Dr. Smith.

The adult male has a beak of shining black, with a conspicuous tooth and notch near the point of the upper mandible, which is curved; the feathers at the base of the beak, those of the lore, around the eye, and those forming the ear-coverts, black; the irides hazel brown; all the upper part of the head and the neck grey; back and wing-coverts fine chesnut red; upper tail-coverts grey, tinged with red; wing-primaries dusky black, edged with red on the outer web; secondaries and tertials the same, but with broader red margins; upper surface of the tail-feathers with the proximal half white, the distal half black, just tipped with white; the shafts black; the two middle tail-feathers, which are longest, are wholly black except the tips, which are white; the outer tail-feather on each side about three-eighths of an inch shorter than the others. The chin is nearly white; all the under surface of the body very pale red; under tail-coverts white; under surface of the tail-feathers like the upper surface, but the colours less pure; legs, toes, and claws, black. The length of the adult male is about seven inches and a half; length of wing from the carpal joint to the end of the longest feather, three inches and seven-eighths; the first feather of the wing less than half the length of the second, the second nearly as long as the fourth, the third feather the longest in the wing.

The adult female has the beak dark brown; irides hazel, as in the male; no black about the head, but a light-coloured streak over the eye; the whole of the upper surface of the head and body reddish brown; wings like those of the male, but the rufous margins narrower; upper surface of tail-feathers brown, tinged with red; the outer edge of the web of each outside tail-feather dull white. Chin dull white; under surface of the body and the sides greyish white, crossed with greyish brown semilunar lines; abdomen and under tail-coverts, dull white; under surface of tail-feathers grey, tipped with dull white. The length of the female described rather exceeded that of the male. Young males are like adult females, but have the darker semilunar marks on the back as well as on the breast.

Some particulars in reference to the plumage of this Shrike deserve here to be noticed. Mr. Hoy* says, "I have a female bird of the Red-backed species, in the full garb of the adult male. I had found the nest, and observed near the spot apparently two male birds: not being able to discover the female, I was induced to shoot both; and, on dissection, one proved the female, with the eggs much enlarged, and one nearly ready for exclusion. I mention this circumstance, as this change of plumage in some species has been attributed to barrenness." Mr. Blyth has met with almost a similar example, which is noticed as follows:† "The first individual that came under my inspection this season was a very remarkable bird: it was a female, partly in the male plumage; but the ovaries were perfect, and contained eggs; and it was in company with a partner of the other sex at the time it was shot."

Knowing that the adult female of the Grey Shrike, and that of the Woodchat Shrike, next to be described, closely resemble their respective males, except that their plumage is less brilliant, may we not conclude that the really old female of the Red-backed Shrike also resembles the male, but does not acquire that state of plumage in any single year, nor until after having moulted several times? Though not believed formerly, it is now very well known that many birds build nests and produce young before they have attained their own adult plumage.

---

* Mag. Nat. Hist. vol. iv. p. 344.

† Ib. vol. viii. p. 364.

Baron Cuvier has stated, that when the adult female bird differs from the male in the colour of her plumage, the young birds of both sexes, in their first feathers, resemble the female; the young males afterwards putting forth the colours that indicate their sex. When the adult male and female are of the same colour, the young then have for a time a plumage peculiar to themselves. The Pheasant may be quoted in illustration of the first law, and the Partridge as an example of the second. To these two, a third law may be added: whenever adult birds assume a plumage during the breeding season decidedly different in colour from that which they bear in the winter, the young birds of the year have a plumage intermediate in the general tone of its colour compared with two periodical states of the parent birds, and bearing also indications of the colours to be afterwards attained at either period.

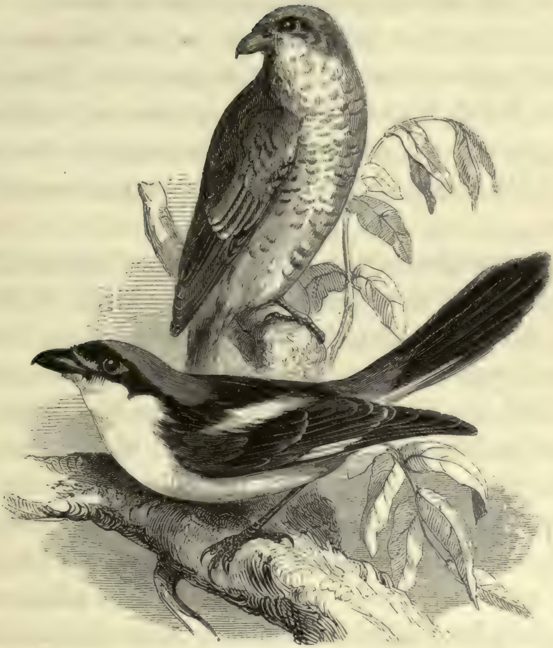
There are various modes by which changes in the appearance of the plumage of birds are produced.

By the feather itself becoming altered in colour.

By the bird's obtaining a certain addition of new feathers without shedding any of the old ones.

By an entire or partial moulting, at which old feathers are thrown off and new ones produced in their places. And by the wearing off the lengthened lighter coloured tips of the barbs of the feathers on the body, by which the brighter tints of the plumage underneath are exposed. These changes will be noticed under the different species most affected by them.

INSESSORES. *LANIADÆ.*
DENTIROSTRES



THE WOODCHAT SHRIKE.

Lanius rutilus.

Lanius	*rutilus,*	*The Woodchat,*	Penn. Brit. Zool. vol. i. p. 277.
"	"	"	Montagu, Ornith. Dict.
"	*rufus,*	"	Bewick, Brit. Birds, vol. i. p. 81.
"	"	"	Selby, Brit. Ornith. vol. i. p. 153.
"	"	"	Jenyns, Brit. Vert. p. 96.
"	"	"	Gould, Birds of Europe, pt. ix.
"	"	*Pie-grièche rousse,*	Temm. Man. d'Ornith. vol. i. p. 146.

Whatever doubts might have existed formerly of the propriety of including the Woodchat among the Shrikes that visit England, there can be no question on this subject now, several instances having occurred in which this bird has been obtained.

One of the earliest specimens recorded as British is that noticed by the Rev. Gilbert White in his 25th letter to Thomas Pennant, dated Selborne, August 30th, 1769.

In the British Museum there is a specimen of the Woodchat, a young male, which formerly belonged to the museum of Dr. Leach, and is labelled as having been killed in Kent.

In a communication to the Magazine of Natural History* on the British species of Shrikes, by Mr. J. D. Hoy, who is devoted to the study of birds and their habits, that gentleman mentions one instance of the Woodchat being killed near Canterbury, that came to his knowledge, and another killed in the neighbourhood of Swaffham in Norfolk, which last bird was in the collection of the late Rev. Robert Hammond. In a collection of birds formerly at Cambridge, which belonged to the Rev. Francis Henson, were a male and female Woodchat, both of which were said to have been killed in Suffolk. From the communication of Joseph Clarke, Esq. of Saffron Walden, I find that Mr. Adams of Gorlestone in Norfolk has in his collection a Woodchat shot by himself; and a few years ago, Mr. Leadbeater received a specimen which had been killed in Yorkshire. Dr. Hastings, in his Illustrations of the Natural History of Worcestershire, says, the Woodchat is stated by Mrs. Perrot to have appeared in the neighbourhood of Evesham. Lastly, I may mention that E. H. Rodd Esq. of Penzance, in a communication read before the Royal Institute of Cornwall in 1840, referred to a male specimen of this rare bird which had been taken in a fishing boat at Scilly.

---

* Vol. iv. p. 341.

In size, in most of its habits, and in its mode of feeding, the Woodchat resembles the common Red-backed Shrike, and, like that species, is said to imitate the voice of several different small birds. Mr. Hoy says, "it differs from *Lanius collurio* in the choice of situation for its nest, placing it invariably on trees, and preferring the oak. The nest is fixed in the fork of a projecting branch, and is composed on the outside of sticks and wool, mixed with white moss from the bodies of the trees, and lined with fine grass and wool. Eggs four or five in number, rather smaller than those of the Red-backed Shrike, and varying much in markings; the ground colour being pale blue in some, in others, a dirty white, surrounded near the larger end with a zone of rust-coloured spots; in some, again, the markings and spots are of a paler colour, and more dispersed over the egg. It is not a wild bird, often building close to houses and public roads. It is abundant in some parts of the Netherlands, and arrives and departs about the same time as *Lanius collurio*."

This Shrike does not visit the higher northern parts of the European Continent; but is found in Germany and France, in which countries it appears in spring, and leaves in autumn, as might be expected,—though M. Le Vaillant says that he had shot the Woodchat in winter in Lorraine. M. Vieillot has remarked that the Woodchat makes choice of odoriferous plants for the construction of part of its nest; and M. Lichstenstein has noticed the same thing in reference to *Lanius minor*.

The Woodchat visits Switzerland, Provence, Italy, Corfu, Sicily, Malta, the Morea, and Egypt. It is abundant in North Africa, and is found at Senegal, and as far south as the Cape of Good Hope, in both of which latter localities it is said to be stationary all the year.

In the adult male, the beak is black, with the same sort of tooth and depression near the point of the upper mandible observed in the Red-backed Shrike; above the base of the upper mandible is a narrow streak of white; the forehead, round the eyes, the ear-coverts, and a small patch depending therefrom, black; irides hazel; crown of the head and nape of the neck, rich chestnut red; the back black; the scapulars white; the rump grey; upper tail-coverts white: the wings and wing-coverts black; the primaries white at the base, forming a spot when the wing is closed; the secondaries white at the end: the central tail-feathers black; the outer feather on each side wholly white; the next on each side with the proximal half white; the distal half black, with a white tip; the next on each side with a white tip only. The chin, throat, breast, belly, and under tail-coverts, white; legs, toes, and claws, black.

The whole length of the male here described was seven inches and a half. The length from the carpal joint to the end of the wing-feathers, four inches: the first wing-feather less than half the length of the second; the third, fourth, and fifth, longer than the second; the third the longest of the whole.

The female has the head and neck dull red; the scapulars dirty white; the black colour of the back mixed with brown; the wing-coverts edged with red; the breast dirty white; the feathers of the flanks reddish tipped with brown.

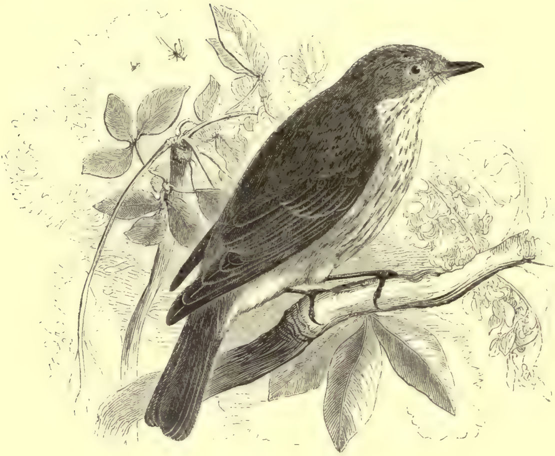
The young bird of the year is reddish brown above, with brown transverse lines; wings and tails brownish black; underneath dirty white, with greyish transverse lines.

The young male in the British collection of Birds in the British Museum, which has been already referred to as having been killed in Kent, and a specimen of a young female in the Museum of the Zoological Society, which bird belonged to the collection of Mr. Vigors; both these, apparently in the plumage of the second or third year, are very much alike, and may be thus described: Head, and nape of the neck, red; back and wings hair brown, without any transverse lines; scapulars and edges of the tertials yellowish white; rump inclining to grey; tail-feathers clove brown; all the under surface of the body dull white, tinged with red, but without bars; beak, legs, and toes, dark brown. Of this last pair of birds, the female is the smaller.

In the illustration at the head of this article, the lower figure represents an adult male bird, the upper figure is that of a young bird of the year.

The vignette below is intended by the artist to refer to " A Woodchat" of another description.

INSESSORES. *MUSCICAPIDÆ.*
DENTIROSTRES.



THE SPOTTED FLYCATCHER.

Muscicapa grisola.

Muscicapa	*grisola,*	*Spotted*	*Flycatcher,*	Penn. Brit. Zool. vol. i. p. 471.
"	"	"	"	Montagu, Ornith. Dict.
"	"	"	"	Bewick, Brit. Birds, vol. i. p. 213.
"	"	"	"	Flem. Brit. An. p. 63.
"	"	"	"	Selby, Brit. Ornith. vol. i. p. 141.
"	"	"	"	Jenyns, Brit. Vert. p. 97.
"	"	"	"	Gould, Birds of Europe, pt. xviii.
"	"	*Gobe-mouche gris,*		Temm. Man. d'Ornith. vol. i. p. 152.

Muscicapa. *Generic characters.*—Beak of moderate length, stout, angular; broad and depressed at the base; compressed towards the point, which is slightly curved: the base surrounded with hairs directed forwards. Nostrils basal, lateral, oval, partly concealed by hairs. Feet with the tarsus the same length, or even longer than the middle toe: the lateral toes nearly equal in length; the outer toe connected to the middle one; the claw of the hind toe stronger and more curved than either of the others. Wings—the first feather very short, the second not so long as the fourth, the third the longest.

The Spotted Flycatcher is one of the latest, but, at the same time, one of the most regular of our summer visitors. White of Selborne remarks, even more than once, in his miscellaneous observations published in the second volume of Mr. Jesse's Gleanings, that the Spotted Flycatcher arrives on the 20th of May. Mr. Selby says, this bird seldom makes its appearance till the oak-leaf is partly expanded, and it begins to form a nest immediately on its arrival. It frequents orchards, gardens, lawns and pleasure-grounds, and is not a little remarkable for the singularity of the places in which it sometimes makes its nest. It is also believed that the same pair of birds return to occupy the same spot for several years in succession.

In the first volume of the Magazine of Natural History, a notice appears of a pair of Flycatchers that formed their nest on the head of a garden-rake left by accident near a cottage. Mr. Blackwall has mentioned an instance of a pair that built their nest in a bird-cage, which had been left with the door open suspended from the branch of a tree in a garden. Mr. Atkinson, in his Compendium of Ornithology, says, we recollect a pair having built on the angle of a lamp-post in one of the streets of Leeds, and there rearing their young. Mr. Jesse, in the second part of his Gleanings, mentions a nest of this Flycatcher, which was found on the top of a lamp near Portland-place in London, having five eggs in it, which had been sat upon. This nest, fixed in the ornamental crown on the top of the lamp, as described, I saw at the Office of Woods and Forests, in Whitehall-place.

The more usual places for this bird's nest are, the side of a faggot-stack, a hole in a wall, or on a beam in an out-building, whence arises one of its provincial names, that of Beam-bird; it also frequently fixes its nest on a branch of a pear-tree, a vine, or a honeysuckle, when trained against a building. Of three cup-shaped nests now before me, one is formed on the outside of old dark-coloured moss, mixed with roots, the lining of grass stems, with only two or three white feathers; the second has the bottom and outside of fresh green moss, lined with a few grass bents, long horse-hairs, and several mottled feathers, apparently those of a Turkey; the third is similar to the last on the outside, but lined with long horse-hairs, wool, and feathers. The labour and art bestowed by birds on the construction of their nests have long been the theme of admiration; but the state of vegetation at the nest-building season of the year, and the care manifested by birds generally in selecting a place of security, render it difficult to obtain a sight of the nest-makers when at work. From what has been observed, however, it is believed that the female is generally the nest-builder; the male collects and brings to her the materials required: long stems of grass, or long horse-hairs, are interwoven by the bird, fixing in one end, and then traversing the edge of the nest, lays in the remainder as she makes circle after circle. A female bird has been seen going backward round the upper edge of the nest, arranging the materials which formed the inner lining. The eggs of the Spotted Fly-catcher are four or five in number, about nine lines in length by seven lines in breadth; the ground colour white tinged with blue, and spotted with pale red. White says, the female while sitting on the eggs is fed by the male even as late as nine o'clock at night.

This bird has no power of voice beyond a chirping call note.

A curious circumstance in reference to this bird has been noticed by Thomas Andrew Knight, Esq. the President of the Horticultural Society. A Flycatcher built in his stove several successive years. He observed that the bird quitted its eggs whenever the thermometer in the house was above 72°, and resumed her place upon the nest again when the thermometer sunk below. According to Mr. Jenyns, the young Flycatchers are hatched about the second week in June: when able to leave the nest, they follow the parent birds, who feed them, and learn them, by their example, to catch insects for themselves. When on the look-out for food, they generally take their stand on the top of a post, on the upper bar of a flight of rails, or the extreme end of a branch of a tree, from whence they dart off on the approach of an insect, appear to catch it with ease by a short and rapid movement, returning frequently to the spot they had quitted, to keep watch as before. These birds are believed to feed almost exclusively on winged insects. They frequent orchards, and have been accused of eating cherries and raspberries; in this belief this bird in some parts of Kent goes by the name of the Cherry-sucker, but they seem rather to be induced to visit fruit-trees for the sake of the flies which the ripe fruits attract, since on examination of the stomachs of Flycatchers killed under such circumstances no remains of fruit were found.

White, in his History of Selborne, says that the Spotted Flycatcher only rears one brood in this country; but I have known some instances of this bird's producing a second hatch, and have been told of several others; and as it does not leave England till near the end of September, there is ample time to bring up a second brood.

The Spotted Flycatcher is common during summer in most of, if not all, the counties of England; and Mr. Thompson of Belfast informs me, it is also a regular summer visitor to the North of Ireland. Dr. Fleming says it is rare in Scotland. Mr. Selby observed it in Sutherlandshire in June 1834; and it is also found in Denmark, Norway, and Sweden. It is a common bird on the European Continent. It is found at Corfu, Sicily, Malta, Crete, and eastward as far as Erzeroom, and its range extends to western and southern Africa, even as far as the Cape.

The beak is dark brown; the irides hazel; the head and the whole of the upper surface of the body and wing-coverts hair brown, the quills and tail-feathers being a little darker, with a few dark brown spots on the top of the head; the tertials with a narrow margin of light brown; the under parts dull white, with a patch of light brown across the upper part of the breast, and a few dark brown streaks or spots upon that and the chin, with a clear white space between; the sides and flanks tinged with yellowish brown; legs, toes, and claws, black.

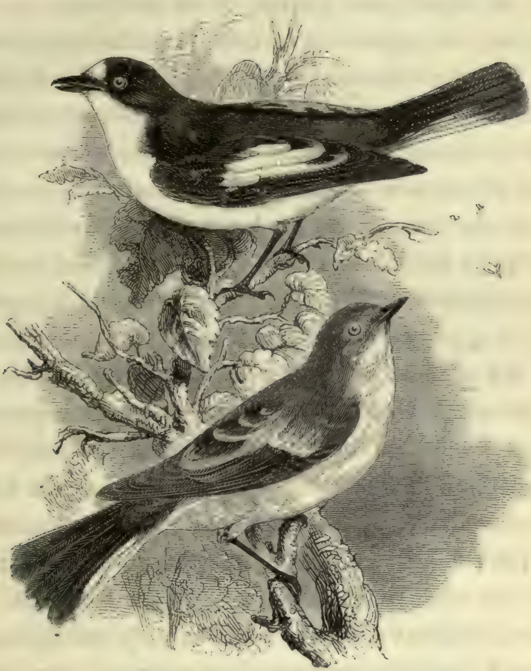
Males and females are alike in plumage.

The whole length of the bird is five inches and five-eighths. From the carpal joint to the end of the longest quill-feather, three inches and three-eighths: the first feather of the wing very short, only about one third of the length of the second; the second very little shorter than the fourth; the third feather the longest of the whole.

The young, when ready to leave the nest, are truly Spotted Flycatchers, each brown feather having a buff-coloured tip, the ends of the great wing-coverts forming a pale wood-brown bar across the wing; under surface white. After their first moult, they may be distinguished from older birds by the broader buff-coloured outer margins of the tertials.

INSESSORES.
DENTIROSTRES.

MUSCICAPIDÆ.



THE PIED FLYCATCHER.

Muscicapa atricapilla.

Muscicapa	*atricapilla,*	*Pied*	*Flycatcher,*	Penn. Brit. Zool. vol. i. p. 473.
„	„	„	„	Mont. Ornith. Dict.
„	„	„	„	Bewick, Brit. Birds, vol. i. p. 210.
„	„	„	„	Flem. Brit. An. p. 63.
„	*luctuosa,*	„	„	Selby, Brit. Ornith. vol. i. p. 143.
„	„	„	„	Jenyns, Brit. Vert. p. 97.
„	„	„	„	Gould, Birds of Europe, pt. vii.
„	„	*Gobe-mouche bec-figue,*		Temm. Man. d'Ornith. vol. i. p. 155.

The Pied Flycatcher is much less numerous as a species than its generic companion last described, and, except in certain localities, is a rare bird in England. It should be considered also as a summer visiter to this country, arriving in April, and quitting it to go further south in September. It appears to be most plentiful in the vicinity of the Lakes of Cumberland and Westmoreland; and in some of its habits, particularly in its mode of feeding, as also in the nature of its food, it resembles the well-known Spotted Flycatcher; but with these distinctions,—that it builds in the holes of decayed oaks or pollard trees, and, as Mr. T. C. Heysham of Carlisle has informed me, is exceedingly noisy and clamorous when its retreat is approached, and that it lays sometimes as many as eight eggs.

"In the season of 1830, a pair had a nest in the identical hole where this species had bred for four successive years. On the 14th of May this nest contained eight eggs, arranged in the following manner: one lay at the bottom, and the remainder were all regularly placed perpendicularly round the sides of the nest, with the smaller ends resting upon it, the effect of which was exceedingly beautiful." The eggs from different nests are found to vary greatly in size.

Its nest is a loose assemblage of roots and grass, with a few dry leaves, dead bents, and hair: the eggs are eight lines and a half long, by six lines and a half in breadth, and of a uniform pale blue colour. The young are hatched about the first or second week in June. Mr. Blackwall says, that the notes of the male are varied and pleasing; and Mr. Dovaston compares its song to that of the Redstart.

Pennant mentions one example of this bird killed near Uxbridge in Middlesex; and I have a young male of the year killed in September, much nearer to London. It has been noticed in Surrey, Essex, Suffolk, Norfolk, Yorkshire, Northumberland, and Durham. On the southern coast, Mr. Blyth has seen a specimen that was shot in the Isle of Wight: it has occurred also, though rarely, in Dorsetshire and Devonshire.

From thence northward it has been noticed in Worcestershire, Lancashire, Derbyshire, Cumberland, and Westmoreland. In a recent Fauna of Scandinavia, this bird is included as visiting Norway and Sweden in summer. It is a periodical visiter in the central parts of Germany and France, and observed to be most numerous in the latter country in spring and autumn, when going to and returning from countries further north. It is abundant in the southern provinces of Europe, and particularly on the coasts and islands of the Mediterranean.

An adult male in the breeding season has the beak black, with a spot of white over its base on the forehead; irides dark brown; upper part of the head and neck, including the eyes, dark brownish black; the back of a decided black: wing-primaries and secondaries brownish black; edges of the greater wing-coverts, and the outer webs of the tertials, pure white; tail-feathers twelve; the outer web and part of the inner web next the shaft of the outer and second tail-feathers, white; the third from the outside, white on a small portion of the outer web only; all the rest of these and the other tail-feathers black: all the under surface of the bird to the end of the under tail-coverts, white; legs, toes, and claws, black.

The whole length of the bird five inches and one-eighth. From the carpal joint to the end of the longest primary three inches and one-eighth: the first wing-feather less than half the length of the second; the second equal to the fifth; the fourth feather longer than the second; the third, the longest in the wing.

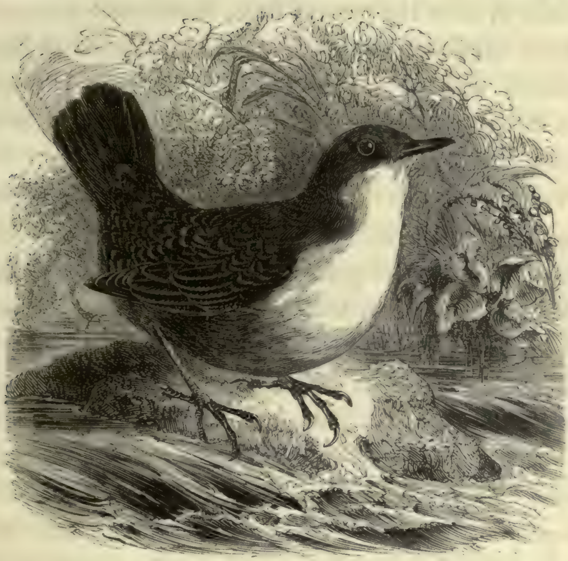
An adult female killed in summer, for which I am indebted to the kindness of John Walton, Esq. of Byard's

Lodge, near Knaresborough, who obtained it in the Valley of Desolation, near Bolton Abbey, has the beak black, without any white over its base; the head, neck, back, and wing-coverts, dark hair brown; wing-primaries brownish black; greater coverts and tertials edged with dull white; tail-feathers marked like those of the adult male, but less bright in colour: under parts dull white; legs, toes, and claws, black.

A young male of the year, killed near London in September, and then changing his plumage, having obtained in part the darker coloured feathers by which the male bird is distinguished, has the beak black, no white mark over its base; the head, neck, back, and wing-coverts, dark hair brown, as in the female, the latter edged with yellowish white; primaries, secondaries, and tertials, black; the latter margined with white, but these edges are not so broad as in the adult male: the markings of the tail-feathers precisely those of the old male, and black and white; chin and under tail-coverts white; breast, belly, and flanks, dull white, tinged with pale brown.

A male killed in the spring, immediately on the arrival of the species in this country, has the beak black, with a conspicuous white mark above its base; head, including the eyes, neck, back, and greater wing-coverts, a mixture of dusky and pure black; rump and upper tail-coverts smoke-grey; primaries dusky black; smaller wing-coverts smoke-grey; greater wing-coverts and tertials broadly edged with white; tail-feathers nearly black, the outer ones edged with white, as in the adult male first described: all the under parts pure white. This bird I believe to be in change to his first breeding plumage, and was obtained in Tunstall Valley, near Wearmouth, Durham.

INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



THE COMMON DIPPER.

Cinclus aquaticus.

Turdus cinclus,	*Water Ouzel,*	Penn. Brit. Zool. vol. i. p. 398.
Sturnus ,,	,, ,,	Mont. Ornith. Dict.
,, ,,	,, ,,	Bewick, Brit. Birds, vol. ii. p. 126.
Cinclus aquaticus,	*The Dipper,*	Flem. Brit. An. p. 66.
,, ,,	*European Dipper,*	Selby, Brit. Ornith. vol. i. p. 172.
,, ,,	*Water Ouzel,*	Jenyns, Brit Vert. p. 98.
,, ,,	,, ,,	Gould, Birds of Europe, pt. vii.
,, ,,	*Cincle plongeur,*	Temm. Man. d'Ornith. vol. i. p. 177.

Cinclus. *Generic Characters.*—Beak of moderate size, angular, and higher than broad at the base ; straight, compressed, and rounded near the end : the point of the upper mandible slightly curving downwards to meet the point of the lower one. Nostrils basal, lateral, placed in a depression, cleft longitudinally, partly covered by a membrane. Wings—the first feather very short ; the second not so long as the third or fourth, which are nearly equal. Feet—three toes before and one behind ; tarsus longer than the middle toe ; the lateral toes equal in length ; the outer toe slightly connected to the middle toe.

Considerable interest is attached to the natural history of the Dipper, or Water Ouzel, from the diversity of opinions that exist even to the present time, in reference not only to its power of diving, which is believed by some to be accomplished without any perceivable muscular effort, but that it can also walk at the bottom when under water with the same ease that other birds walk on dry land.

Never having seen this bird alive, I must be indebted to the recorded observations of those who have; and one of the most complete and perfect accounts that I am acquainted with is that by Mr. Macgillivray, published in the first volume of the Naturalist, page 105.

The Dipper frequents clear, rocky mountain streams, and although allied to the Thrush or the Blackbird in its internal organization, and in many of its actions on land, it has also the habits and powers of the Moorhen; living constantly by the sides of rivers, swimming and diving with great facility, and feeding principally upon the various aquatic insects with which the bottoms of streams abound.

I am indebted to the kindness of my friend John Morgan, Esq. for the only opportunity that has occurred to me of dissecting a specimen of this bird, which came from Wales. The muscles and other parts of the organs of voice are similar to those of the Thrush; but I found nothing in the structure of this bird internally that could induce me to believe that it possessed the powers which have been so frequently attributed to it, of diving and remaining on the ground at the bottom of the water, without making any visible muscular effort. Its short wings are well adapted for diving; but, clothed with its feathers, the specific gravity of the Dipper must be considerably less than that of an Otter or a Beaver,—and we know that diving and remaining under water is not accomplished by these animals without using great and continued exertions. Accordingly Mr. Macgillivray observes, "I have seen the Dipper moving under water in situations where I could observe it with certainty; and I readily perceived that its actions were precisely similar to those of the Divers, Mergansers, and Cormorants, which I have often watched from an eminence as they pursued the shoals of sand-eels along the sandy shores of the Hebrides. It, in fact, flew, not merely using the wing from the carpal joint, but extending it considerably, and employing its whole extent, just as if moving in the air. The general direction of the body in these circumstances is obliquely downwards; and great force is evidently used to counteract the effects of gravity, the bird finding it difficult to keep itself at the bottom. Montagu well describes the appearance which it presents under such circumstances: in one or two instances, where we have been able to perceive it under water, it appeared to tumble about in a very extraordinary manner, with its head downwards, as if picking something; and at the same time great exertion was used, both by wings and legs. When searching for food, it does not proceed to great distances under water; but, alighting on some spot, sinks, and soon reappears in the immediate neighbourhood, when it either dives again, or rises on the wing to drop somewhere else on the stream, or settle on a stone. The assertion of its walking below the water, which some persons have ventured, is not made good by observation, nor countenanced by reason. The Dipper is by no means a walking bird: even on land I have never seen it move more than a few steps, which it accomplished by a kind of leaping motion. Its short legs and long curved claws are very ill adapted for running, but admirably calculated for securing a steady footing on slippery stones, whether above or beneath the surface of the water."

The Dipper may be said to be local rather than rare, but is seldom found in the counties around London. The nearest spot in which I have heard of a Dipper being seen was at a water-mill tail at Wyrardisbury on the Colne, about two or three hundred yards above the place at which it falls into the Thames, just below Bell Weir. It has also been seen on the Mole, near Esher.

It is not uncommon in Devonshire and the eastern parts of Cornwall, where, according to Mr. Couch, it is called the Water Thrush. Mr. E. H. Rodd of Penzance says, it is less frequent about the rivers of the western part of the county; which may in some measure be accounted for by the streams in the west of Cornwall being strongly impregnated by contact with mineral ore, and, in all probability, proving equally destructive to aquatic insects as to fish. It is of frequent occurrence in Wales; and Mr. Thompson sends me word that it is common throughout Ireland.

The Dipper has been seen in Essex, and occasionally in Norfolk. In some parts of Cheshire, Derbyshire, and Yorkshire it is not uncommon, and probably in all the counties northward throughout Scotland; but I do not find it noticed as inhabiting the Hebrides, Orkney, or Shetland. It is found in Scandinavia, Siberia, Russia, Germany, the Alps, Pyrenées, and Switzerland. It is common in the northern parts of Spain, where it is also called Water Thrush (*Tordo de agua*). Keith Abbott, Esq. has forwarded Specimens of this bird to the Zoological Society from Trebizond and Erzeroom, the most eastern locality, as far as I am aware, that has been yet quoted for it.

The Dipper is secluded in its habits; and it rarely happens that more than two are seen together, except in summer, when the parent birds are accompanied by their young. Its flight is rapid and even, not unlike that of the Kingfisher; and Mr. Gould, who has had opportunities of observing this bird both in Wales and Scotland, informs, me that its song, though louder—its habit of elevating and jerking its tail, its general manners, and the form as well as the materials of its domed nest, all closely resemble those of the Wren. It builds early, and conceals its large nest with great art. If a cavity in a moss-covered rock is chosen, the nest is formed of a mass of closely interwoven moss, seven or eight inches deep, and ten or twelve inches in diameter, with a hollow chamber in the centre lined with a few dry leaves, to which access is gained by a small aperture through the moss on one side. Sometimes the nest is placed under a projecting stone, forming part of a cascade, and behind the sheet of water that falls over it. The eggs are from four to six in number, measuring one inch in length by nine lines in breadth, pointed at the smaller end, and white.

Mr. Macgillivray, who has examined the contents of the stomach in these birds on various occasions, has found only beetles and the animals of fresh-water shells belonging to the genera *Lymnea* and *Ancylus*; the larvæ of various *Ephemera* and *Phryganea* have also been mentioned, and those of other aquatic insects. In some parts of Scotland this little bird "is destroyed by every device from an idea that it feeds upon the salmon spawn; but this is not established."

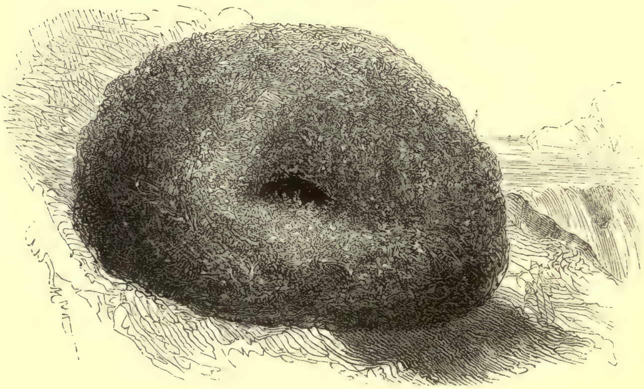
The beak is brownish black; the irides hazel; the margin of the eyelids white; the head and neck to the commencement of the back umber brown; back, wings, and wing-coverts, rump and tail-feathers, sides, flanks, and under tail-coverts, brownish black; the margins of the wing-coverts, and the tips of the feathers of the body, of a lighter greyish black; chin, neck, and upper part of the breast, pure white; lower part of the breast chesnut brown; legs, toes, and claws, brown. Females resemble the males.

The whole length of the specimen described measured seven inches and one quarter. From the carpal joint to the end of the wing, three inches and three-eighths; the first wing-feather less than half the length of the second, which is equal in length to the third; and both the second and third longer than the fourth.

The young bird in its first plumage has the whole of the upper parts dull greyish brown; the wing-coverts and tertials tipped with greyish white; the chin white; the feathers of the front of the neck and breast pale buff tipped with brown; belly, sides, and vent, grey, with darker lines.

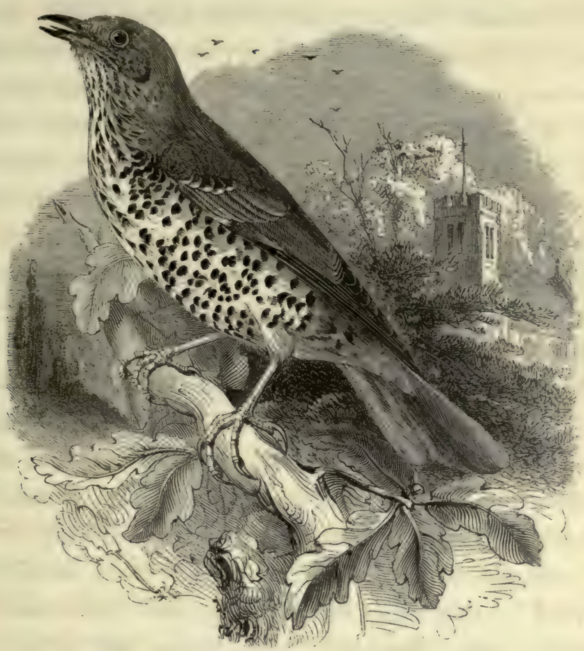
The Penrith Ouzle of Pennant's British Zoology appears to be a young bird of the common Dipper in its first year.

The vignette below represents a nest of the Dipper, for which I am indebted to the kindness of Mr. J. D. Salmon of Thetford, who received it from Yorkshire.



INSESSORES.
DENTIROSTRES.

MERULIDÆ.



THE MISSEL THRUSH.

Turdus viscivorus.

Turdus viscivorus,	*Missel Thrush,*	Penn. Brit. Zool. vol. i. p. 401.
„ „	„ „	Mont. Ornith. Dict.
„ „	„ „	Bewick, Brit. Birds, vol. i. p. 117.
„ „	„ „	Flem. Brit. An. p. 64.
Merula viscivora,	„ „	Selby, Brit. Ornith. vol. i. p. 158.
Turdus viscivorus,	„ „	Jenyns, Brit. Vert. p. 98.
„ „	„ „	Gould, Birds of Europe, pt. i.
„ „	*Merle Draine,*	Temm. Man. d'Ornith. vol. i. p. 161.

Turdus. *Generic Characters.*—Beak of moderate size, straight, convex above; point of the upper mandible compressed, notched, and slightly curved downwards; the gape furnished with a few hairs. Nostrils basal, lateral, oval, partly closed by a naked membrane. Wings with the first feather very short; the second feather shorter than the third or the fourth, which are the longest. Feet with the tarsus longer than the middle toe; the outer toe connected with the middle toe at the base.

The Missel Thrush is one of the largest of the British species of Thrush, and though not very numerous anywhere is yet very generally diffused, as its range in this country, to be hereafter quoted, will evince. It is rather a shy bird, frequenting small woods, and the high trees in hedges bounding large meadows; but during the breeding-season it becomes bold and quarrelsome, driving away the smaller birds in all directions from its haunts, so much so as in Wales, according to Pennant, to have acquired the name of *Penn y llwyn*, or, master of the coppice. It is resident in this country all the year, and the male commences his song very early in the season, sometimes in February. His strain, which is something like that of the Blackbird, but not so good in quality of tone, is repeated many times in succession, and generally from the top of some lofty oak, beech, or fir tree; but he has been occasionally observed to sing while on the wing, and from a habit of giving his song frequently both before and during the occurrence of wind and rain, the name of Storm-cock is a well-known appellation for the Missel Thrush. It is also called the Holm Thrush, probably owing to its partiality to the Oak, from the top of which this Thrush will sometimes continue to repeat its song for an hour together, and occasionally also has its nest in the oak—

> "The fruitful Olive, and the Platane round;
> The carver Holm;* the Maple seldom inward sound."
>
> Spenser.

A good botanist has reminded me that the red berries borne by the plant named Butchers broom, *Ruscus aculeatus*, which grows on bushy commons, are called Holm-berries;

---

* The Holm oak, the evergreen oak, *Quercus ilex*.

and as the Missel Thrush is a decided feeder on berries generally, it may have acquired the name of Holm Thrush from feeding on the Holm-berry.

This bird is not observed to be partial to low flat land, near water, to which the word Holm or Holme is also applied.

The Missel Thrush is one of the earliest of our breeders, beginning to build in April, and fixes its nest in the fork of a branch of a tree, frequently that of an apple tree in an orchard. The nest is composed externally of lichen, moss, dry grass, and coarse stems of other plants. This outside framework is coated internally with a layer of mud, and this again is covered with a lining of fine grasses. The nest is sometimes very artfully concealed by assimilating the colour of the materials to that of the branch on which it is placed; but, on the contrary, it is sometimes placed in the most conspicuous and exposed situations, so that it is scarcely possible to pass the nest without discovering it. The eggs are four or five in number, of a greenish white colour, spotted with red brown; sometimes the ground colour is reddish white, spotted with dark red brown; the length one inch three lines, the breadth eleven lines, but occasionally varying in size. The female while sitting exhibits much of the boldness of character observed at that season in the male, and has been known to fly at the face of a man who disturbed her. Two broods are produced in the season, and during autumn and winter small parties may be seen together, probably composed of the parent birds and their young birds of the year.

The flight of the Missel Thrush is rapid, but irregular and uneven, being performed by a succession of jerks. Its food is various soft-bodied animals, as worms, slugs, &c.; some fruit in the season; and it is also a most decided feeder on berries of all sorts, including those of the misseltoe, from whence it derives its most common name: the germination of the seeds is accelerated by the warmth and moisture of the body of the bird. The flesh of the Thrushes generally is eatable; and in some species it is excellent.

The Missel Thrush is well known in our southern counties to the Land's end; it is found also in Wales, as has been already noticed; and, according to Mr. Thompson, though formerly rare in Ireland, it is now common and indigenous to Ulster. North of London, it is found in Essex, Suffolk, Norfolk, Yorkshire, Northumberland, Durham, and probably all the midland counties; and, as observed by Mr. Selby, this bird is rapidly increasing in numbers still farther to the northward; but I do not find it quoted as an inhabitant of the islands west or north of Scotland. It nevertheless inhabits Scandinavia and Russia, and has been found by Mr. Blyth in India. It is found in Germany, France, Provence, and Italy. In this country, and in the central portions of Europe, the Missel Thrush is resident all the year; but it leaves both Italy and Scandinavia during the winter.

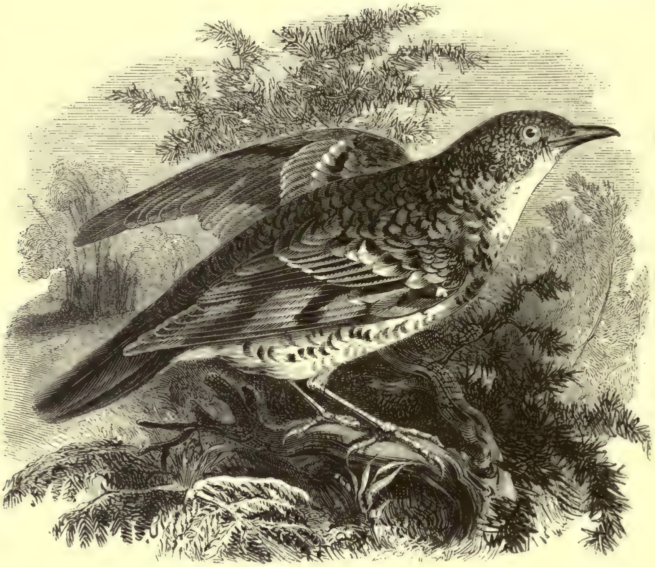
The beak of this bird is dark brown; the under mandible pale yellow at the base; the irides hazel; the top of the head, and almost all the upper surface of the body, nearly uniform clove brown: wings and wing-coverts umber brown; the latter broadly edged with wood-brown; the wing-feathers with a narrow edge of the same colour; upper surface of the tail-feathers umber brown; the broad inner web of each outside tail-feather with a patch of dull white; the second feather on each side with a smaller patch at the tip; the tail slightly forked: all the under surface of the body white, tinged with yellow, and covered with numerous black spots; those on front of the neck triangular in shape, with one angle pointing upwards; the spots on the breast, belly, and sides are round; under surface of the wings and tail grey; tarsi and toes pale brown; the claws dark brown.

Males and females exhibit but little difference in size or plumage.

The whole length of the adult bird is about eleven inches. From the carpal joint to the end of the wing, five inches and three-quarters; the first wing-feather only one inch long; the second feather the same length as the fifth; the third and fourth feathers equal, and the longest in the wing.

The young bird when about to leave the nest exhibits a greater variety of markings on the upper surface of the body than the parent birds; the feathers on the head, neck, upper part of the back, and smaller wing-coverts, have a central stripe of buff, with a black spot at the tip; those of the greater coverts and tertials have broad external edges of rich buff. On the under surface the chin is white; the other parts tinged with fawn colour, and marked with black spots.

INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



WHITE'S THRUSH.

Turdus Whitei.

Turdus Whitei,	*White's Thrush,*	Eyton, Rarer Brit. Birds, p. 92.
„ „	„ „	Gould, Birds of Europe, pt. xxi.
„ „	„ „	Harvey, Fauna of Cork, p. 6.
„ *varius,*	*Seu Whitei,*	Temm. Man. d'Ornith, vol. iv. p. 602.
„ *Whitei,*	*White's Thrush,*	Ann. Nat. Hist. vol. xi. p. 68.
„ *aureus,*	*Grive doree,*	Holandre, Faune de la Moselle, p. 60.

By the kind permission of the Earl of Malmesbury, I am enabled to give a figure from that extremely beautiful Thrush which was shot by his lordship himself on his estate at Heron Court, near Christchurch, in January 1828; and his lordship has very kindly allowed me the free use of this specimen, to make a close examination of it, and by taking the measurements of the various parts of the bird, to institute a comparison between it and two others which have been brought to this country from the East, one of them found in Japan, the other in Java; specimens of the first of which are in the Museum of the Zoological Society, and of the second in the Museum of the Honourable East India Company. The measurements of this latter specimen I have obtained through the kindness of Dr. Horsfield, by whom this species was first made known. To Mr. Jesse I am indebted for an introduction to his friend Mr. Bigge of Hampton Court, who has allowed me the use of a specimen of a Thrush which appears to be identical with Dr. Horsfield's Thrush from Java, and also with specimens from Australia, which are certainly very closely allied to the Javanese Thrush. Mr. Bigge's bird is said to have been shot in the New Forest, Hampshire, by one of the forest-keepers, who parted with it to a bird-preserver at Southampton, of whom Mr. Bigge bought it for his own collection. The measurements of these various examples will enable the reader to decide on the species.

Lord Malmesbury's bird measures twelve inches and a half. The length of the wing from the carpal joint to the end of the longest primary, six inches and three-eighths; the first feather of the wing-primaries is very short; the second and fourth equal in length; the third feather the longest in the wing.

The Japan Thrush measures twelve inches in its whole length: the wing six inches and four-eighths;—the first feather very short; the second a little longer than the fifth; the third and fourth feathers equal, and the longest.

Two specimens of a Thrush in every respect the same as the Japan Thrush have been shot on the banks of the

Elbe. One of these was lately obtained in a fresh state by Mr. Gould when at Hamburgh, and is figured in the twenty-first part of his beautiful work on the Birds of Europe. This specimen, with a wing rather longer than the Japanese bird, is now in the collection of T. B. L. Baker, Esq. of Hardwicke Court, Gloucester.

Dr. Horsfield's bird from Java, *Turdus varius*, measures ten inches and three-quarters; the wing five inches and four-eighths;—the first feather short; the second and sixth equal; the third, fourth, and fifth also equal, and the longest in the wing.

Mr. Bigge's specimen is eleven inches and a half long; the wing five inches and four-eighths;—the first feather short; the second as long as the sixth; the third, fourth, and fifth of equal length, and the longest in the wing.

An Australian specimen, also in the Museum of the Zoological Society, measures twelve inches in length: the wing five inches and four eighths; the first feather short; the second shorter than the sixth; the third, fourth, and fifth nearly equal, and the longest.

So much alike in their colour and markings are the six birds just referred to, that one description would apply to all: but in the relative size and structure of the wing, particularly, it will be seen that Lord Malmesbury's Hampshire Thrush, the Hamburgh specimen, and that from Japan, appear to be identical; while that from Java, Mr. Bigg's bird, and the specimen from Australia, appear also to be identical.

In Lord Malmesbury's Thrush the beak is two lines shorter, and the tarsus one line shorter, than the same parts in either of the Eastern specimens, all of which in these particulars are very nearly alike. Mr. Gould remarks that in his Hamburgh specimen also the beak was smaller than those of the Eastern specimens.

The circumstance of the Japan bird occurring in three different instances in Europe, is less remarkable than might at first appear, when we remember that in the recently published Supplement to the Land Birds of his Manual, M. Temminck has given a catalogue of the names of one hundred and fourteen birds which are found both in Europe and Japan; that number of species in the two countries being considered identical by this gentleman, who is one of the best authorities as an Ornithologist in Europe. Of these one hundred and fourteen birds common to Europe and Japan, eighty-six are found in the British Islands. Mr. Gould considers that the large size of the wing in this new European Thrush indicates migratorial powers and habits, and that it is in all probability dispersed over a great part of southern Siberia. Should this eventually prove to be the case, the southern migration of this bird is then nothing more than that which is performed every year by the Fieldfares and Redwings, two species so closely allied to it as to belong to the same genus; and these two Thrushes breeding in June in the most northern parts of Norway and Lapland, were found by Mr. Strickland in winter at Smyrna, about three degrees farther south than the north of Japan. Lord Malmesbury's bird was shot on the 24th of January, and proved to be a male. The Ornithologists of this country are much indebted to his lordship for the knowledge of this handsome addition to the list of British Thrushes.

Since the publication of the preceding portion of this subject, a notice has appeared in the eleventh volume of the Annals of Natural History, and another in the Fauna of the County of Cork, stating, that early in the month of December 1842, an example of this rare Thrush was obtained by Mr. Spraine at his residence near Bandon in the County of Cork, and is now in the possession of G. J. Allman, Esq., of Grattan street, Dublin. I have also learned, by obtaining a copy of the Fauna of the Department of the Moselle, published in 1825, at Metz, by M. J. Holandre, librarian and conservator of the Museum of Natural History in that city, that a specimen of this Thrush had been taken, with several other Thrushes, a few leagues from Metz, in the wood of Rezonville, in the month of September 1788. This bird was first in the collection of the late Baron Marchant, and is now in the Museum of the city of Metz. The opinion of Baron Marchant was, that this species might in summer visit some part of the north of Asia, and that the individual he possessed, driven by some accidental circumstances, out of the line of migration peculiar to the birds of that part of the world, had then fallen into the track of European migration. Bryan H. Hodgson, Esq., includes this species in his catalogue of the Birds of Nepal, and Mr. Blyth has sent it from Calcutta. M. Temminck seems to incline to the opinion that the specimens found in Japan, those found in India, and the seven or eight examples which have been taken in different parts of Europe, all belong to the same species.

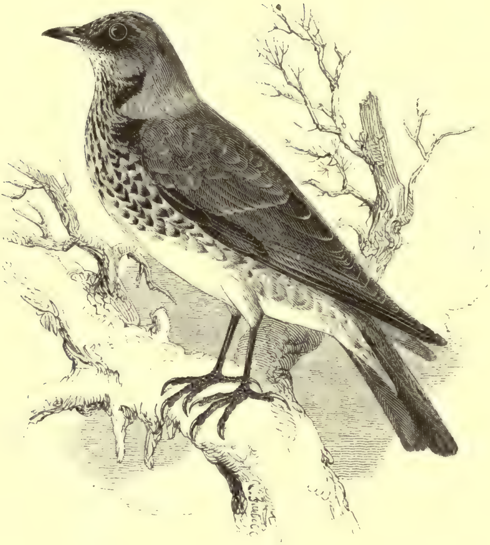
Of the habits of this species but little, I believe, is known; in Japan M. Temminck says it inhabits high mountains.

The beak is dark brown, except the base of the under mandible, which is pale yellow brown; the space between the beak and the eye pale wood-brown; the irides hazel: the feathers on the upper part of the head and neck yellow brown, tipped with black; those of the back, scapulars, and the upper tail-coverts, darker brown, with a crescentic tip of black, the shaft of each feather yellow: the smaller wing-coverts have broad pale yellow ends, the lateral webs black, the shafts yellow brown; the greater wing-coverts dark brown with light yellow brown ends, together forming two oblique descending bars; the feathers of the spurious wing are light yellow brown, tipped with black, forming an ascending oblique bar; the wing-feathers pale brown on the outer web, brownish black on the inner web, with dark brown ends, the shafts black: the four central tail-feathers uniform pale brown; the others darker in the webs, but lighter at the ends, and of these the outer tail-feathers are the lightest. The chin and throat is white; from the lower edge of the under mandible descends a narrow dark streak; the neck, breast, and all the under surface, white, tinged on the breast and flanks with yellow brown, all the feathers having a black semilunar tip; before the wing on each side, the brown colour of the back extends a little forward toward the breast; anterior under wing-coverts white at the base, and black at the tip; under tail-coverts white; under surface of the tail-feathers greyish brown, the shafts white; legs and toes pale brown, the claws rather lighter.

This bird having been killed in Hampshire, was named after White of Selborne by my friend T. C. Eyton, Esq.

INSESSORES.
DENTIROSTRES.

MERULIDÆ.



THE FIELDFARE.

Turdus pilaris.

Turdus pilaris,	*The Fieldfare,*	PENN. Brit. Zool. vol. i. p. 404.
" "	"	MONTAGU, Ornith. Dict.
" "	"	BEWICK, British Birds, vol. i. p. 121.
" "	" *Thrush,*	FLEM. Brit. An. p. 65.
Merula "	"	SELBY, Brit. Ornith. vol. i. p. 160.
Turdus "	"	JENYNS, Brit. Vert. p. 99.
" "	"	GOULD, Birds of Europe, pt. viii.
" "	*Merle litorne,*	TEMM. Man. d'Ornith. vol. i. p. 163.

THE FIELDFARE is a well-known migratory Thrush that comes to us from the North, and is one of the latest if not the last species that makes its annual and regular winter visit to Great Britain and the North of Ireland. It seldom appears much before the beginning of November, depending on the temperature of the season, and frequently later than that, arriving here in large flocks in search of food, and if the weather continues open and mild, spreading themselves over pasture-lands to look for worms, slugs, the larvæ of insects, and any other soft-bodied animals of that sort; but on the occurrence of snow or frost, they betake themselves to the hedges, and feed greedily on haws and various other berries. At this time they are much sought after by youthful gunners, who find them shy and difficult to approach: the whole flock taking wing and keeping together, settle by scores on some distant tree, from whence, if again disturbed, they wheel off in a body as before. Should the weather become very severe, the Fieldfares leave us to go farther south, and are again seen on their return. They are known to go as far to the south and to the east as Minorca, Sicily, Malta, Smyrna, and Erzeroom. The Fieldfare does not return to its breeding-ground till late in the season. I have known them shot on the 12th of May, and others have been seen much later. White of Selborne says, that one particular season they remained till the beginning of June; and he asks, why do they not breed in the Highlands? Some instances have occurred of the Fieldfare breeding in this country; and Pennant, or the editor rather of the last edition of the British Zoology, mentions two instances that came to his knowledge. More recently, a nest has been found in Kent, and others in Yorkshire and Scotland; but in Orkney and Shetland, according to the observations of Mr. Dunn, it is only seen on its passage to and from other countries. Mr. W. C. Hewitson, who visited Norway a few summers since, thus describes the nesting habits of the Fieldfare:—After a long ramble through some very thick woods, "our attention was attracted by the harsh cries of several birds, which we at first supposed must be Shrikes, but which afterwards proved to be Fieldfares. We were soon delighted by the discovery of several of their nests, and were surprised to find them (so contrary to the habits of other species of the genus *Turdus* with which we are acquainted) breeding in society. Their nests were at various heights from the ground, from four feet to thirty or forty feet or upwards, they were, for the most part, placed against the trunk of the spruce fir; some were, however, at a considerable distance from it, upon the upper surface and towards the smaller end of the thicker branches: they resembled most nearly those of the Ring Ouzel; the outside is composed of sticks, and coarse grass and weeds gathered wet, matted with a small quantity of clay, and lined with a thick bed of fine dry grass: none of them yet contained more than three eggs, although we afterwards found that five was more commonly the number than four, and that even six was very frequent; they are very similar to those of the Blackbird, and even more so to the Ring Ouzel. The Fieldfare is the most abundant bird in Norway, and is generally diffused over that part which we visited; building, as already noticed, in society, two hundred nests or more being frequently seen within a very small space." The eggs are light blue, mottled over with spots of dark red brown; the length one inch three lines, the breadth ten lines.

Wm. Christy, Esq., Jun., who, with a party of naturalists, visited Norway in the summer of 1836, says, on the mountains called the Dovrefeld, Fieldfares were rearing their young; they were just able to fly about on the 6th of August.

The call-note of the Fieldfare is harsh; but its song is soft and melodious. In confinement it soon becomes reconciled, and sings agreeably. At night when at large it frequents evergreens and thick plantations; but, unlike its congeners, it has frequently been known to roost on the ground among fern, heath, or furze, on bushy commons.

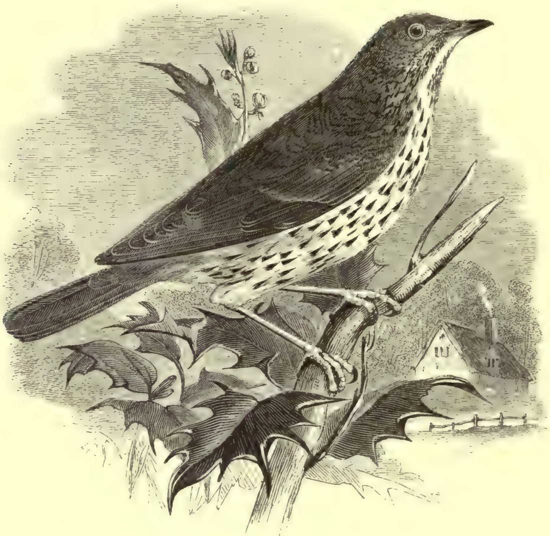
This bird is well known in Sweden, Russia, and Siberia, where it is found only in summer: in Poland, Prussia, and Austria, it remains the whole year; but in France, and the southern countries of Europe, it is a winter visitor, extending its migration, in that season only, as before stated.

The point of the beak is black: the base of the upper mandible dark brown, the base of the lower mandible pale yellow brown; the space between the beak and the eye black; the irides hazel brown; the upper part of the head ash grey, spotted with dark brown; the neck, ear-coverts, upper part of the back, rump, and upper tail-coverts, ash grey; the back, wings, and wing-coverts, rich hazel brown; greater wing-coverts edged with grey; wing-primaries dark slate grey, the outer edges and tips lighter grey, the shafts black: upper surface of tail-feathers nearly black; the tail in form slightly forked: chin and throat golden amber, streaked longitudinally with black; the breast reddish brown, spotted with black: the belly, flanks, and under tail-coverts, white; the two latter spotted with greyish brown and dark brown: under wing-coverts white; under surface of wing-primaries and of the tail-feathers dark slaty grey: legs and toes dark brown; claws black.

The whole length of the Fieldfare is full ten inches: the length of the wing from the carpal joint, five inches and five-eighths; the first wing-feather very short; the second a little longer than the fifth; the third and fourth feathers equal in length, and the longest in the wing.

The female has the beak darker brown; the head more clouded with brown; the colour of the back less pure, and the legs of a paler brown.

INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



THE SONG THRUSH.

Turdus musicus.

Turdus	*musicus,*	*The Song*	*Thrush,*	Penn. Brit. Zool. vol. i. p. 407.
,,	,,	,,	,,	Montagu, Ornith. Dict.
,,	,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 119.
,,	,,	*Common*	,,	Flem. Brit. An. p. 64.
Merula	*musica,*	*Song*	,,	Selby, Brit. Ornith. vol. i. p. 162.
Turdus	*musicus,*	,,	,,	Jenyns, Brit. Vert. p. 100.
,,	,,	,,	,,	Gould, Birds of Europe, pt. iv.
,,	,,	*Merle Grive,*		Temm. Man. d'Ornith. vol. i. p. 164.

The Song Thrush is not only well known, but is also a general favourite, from the prevailing opinion that of our larger singing birds the Thrush is the best, possessing to a greater extent than others a combination of the three requisites;—power, quality of tone, and variety. Its song is also continued through a large portion of the year, beginning early in spring, and continuing it at intervals till autumn. In addition to this great recommendation to favour, the bird is inoffensive in habit, elegant in shape, sprightly in action, and engaging by its confidence. It is a native of Europe generally, and resident throughout the year in all the more temperate portions. It is not, like the Redwing, gregarious, but is so distributed that scarcely any district not entirely destitute of wood is found to be without it. It frequents more particularly small woods, plantations, and shrubberies, seeking its food in meadows, lawns, and gardens. It feeds on insects, worms, various species of garden snail (the shells of which are broken against a stone, and afterwards shaken off with great dexterity), fruit, and, in the winter, various berries. In the grape countries of Europe, the Thrush feeds luxuriously during autumn on ripe grapes; and in France this bird is in great request for the table at that time, from the extra condition and flavour which abundance of this rich food imparts to its flesh.

White of Selborne considered it a rule, that whenever there was incubation, there was music; and the early spring song of the Thrush is an equally true indication of an early-breeder. The nest is frequently placed in the centre of a thick and tall bush or shrub, sometimes in a holly or fir tree, and occasionally this bird has been known to make its nest in an open shed or tool-house. The nest formed externally of green moss and fine roots; the inner surface smooth and compact, being lined with a thin coating of cowdung and rotten wood, so equally spread over and cemented, that when dry, it will, for a time, hold water; and so much rain has been found in a Thrush's nest in an exposed situation, as to have induced the belief that the nest had been deserted as untenable. The eggs are usually four or five in number, of a beautiful light blue colour, with a few small well-defined black spots over the larger end: the length of the egg one inch one line, by ten lines in breadth. An observer, in Mr. Loudon's Magazine of Natural History, after detailing some particulars as to the nest building by a pair of Thrushes, writes, "When all was finished, the cock took his share of the hatching; but he did not sit so long as the hen, and he often fed her while she was upon the nest. In thirteen days the young birds were out of the shells, which the old ones always carried off." Mr. Jenyns, in his Manual, says, the young of the first brood are hatched about the beginning of April, and sometimes earlier. I remember once to have seen young Thrushes on the last day of March. The parent birds rear two broods in the season.

Mr. Knapp, in his Journal of a Naturalist, has related an interesting fact in reference to the Thrush in the following terms:—"We observed this summer two Common Thrushes frequenting the shrubs on the green in our garden. From the slenderness of their forms and the freshness of their plumage, we pronounced them to be birds of the preceding summer. There was an association and friendship between them that called our attention to their actions. One of them seemed ailing, or feeble from some bodily accident; for though it hopped about, yet it appeared unable to obtain sufficiency of food. Its companion, an active, sprightly bird, would frequently bring it worms or bruised snails, when they mutually partook of the banquet; and the ailing bird would wait patiently, understand the actions, expect the assistance of the other, and advance from his asylum upon its approach. This procedure was continued for some days; but after a time we missed the fostered bird, which probably died, or by reason of its weakness met with some fatal accident."

Towards the end of autumn our native Thrushes receive a considerable accession in number from the birds that arrive from the North. M. Nilsson, a Professor of Natural History in Sweden, says, "the Thrushes leave that country for the winter, and come further south;" and Mr. Selby remarks, that, "like many of our autumnal visitants, they arrive with a north or north-east wind, plainly indicating the countries from which they hold their progress. After recruiting their strength for a few days, they move onward in a southerly direction."

The Thrush is universally spread over Britain and its islands: it is also common during summer in Denmark, Sweden, Norway, and Russia. From thence southwards it extends over Germany, France, Italy, Corfu, Sicily, Malta, and the Morea, in autumn and winter, and has been seen as far east as Smyrna, Trebizond and Erzeroom.

The beak is umber brown, except the base of the under mandible, which is a paler yellow brown; the irides hazel brown; the upper part of the head, neck, and back, wings, rump, and upper surface of the tail-feathers, dark hair-brown; the external edges of the primaries and wing-coverts wood-brown; from the beak to the eye a dark brown streak, with a lighter brown streak over it; the eyelids light brown; the feathers forming the ear-coverts mottled with two shades of brown, with darker coloured tips forming part of a circle; the chin white; the throat, sides of the neck, breast, and flanks, ochraceous yellow, spotted with dark brown; belly, vent, and tail-coverts, nearly white, the former with a few well-defined spots of dark brown; under surface of tail-feathers reddish brown; legs and toes pale brown, claws darker brown.

The whole length rather less than nine inches. The wings from the carpal joint to the end of the longest primary, four inches and five-eighths : the first feather very short ; the second rather longer than the fifth ; the third and fourth nearly equal in length, longer than the second ; the third the longest in the wing.

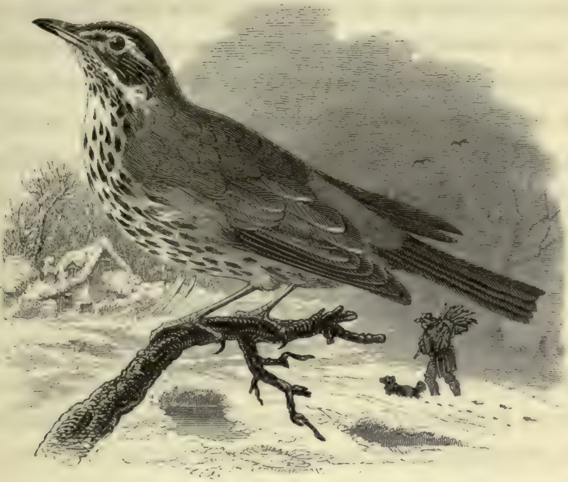
The female is smaller than the male ; the head and upper part of the neck are lighter ; the white of the breast not so pure, with less of the yellow colour ; the breast spots larger, and not so well defined.

The back and scapulary feathers in young birds have each a pale yellowish spot in the centre, and the smaller wing-coverts streaked with pale brown.

Varieties in colour among Thrushes are not uncommon.

The sternum, or breastbone, in Birds may be considered the most characteristic, as it is also one of the most important, of the bones in their skeleton. It has already been observed, page 112, that the extent of surface furnished by the sides and keel of this bone indicate the size and strength of the muscles which move the wings, and therefore afford a criterion by which to judge of the comparative power of flight possessed by the species. The breastbone also supports and protects all the most important soft parts of the body. A figure of the sternum of one species in each genus, as far as practicable, will therefore be introduced among the vignettes, for the purpose of illustrating generic form in bone, and the general accordance in figure, in conjunction with external characters and habits, may be accepted in proof of systematic arrangement.

INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



THE REDWING.

Turdus iliacus.

Turdus	*iliacus,*	*The Redwing,*	**Penn.** Brit. Zool. vol. i. p. 409.
,,	,,	,,	**Mont.** Ornith. Dict.
,,	,,	,,	**Bewick,** Brit. Birds, vol. i. p. 123.
,,	,,	*Redwing Thrush,*	**Flem,** Brit. An. p. 65.
Merula	*iliaca,*	*The Redwing,*	**Selby,** Brit. Ornith. vol. i. p. 165.
Turdus	*iliacus,*	,,	**Jenyns,** Brit. Vert. p. 100.
,,	,,	,,	**Gould,** Birds of Europe, pt. iv.
,,	,,	*Merle Mauvis,*	**Temm.** Man. d'Ornith. vol. i. p. 165.

The Redwing is another winter visitor to the British Islands, which, like the Fieldfare, comes to us in flocks from the northern and north-eastern parts of Europe, but with this difference, that they make their appearance earlier in the year than the Fieldfare, arriving frequently by the middle or before the end of October. It has also been observed that the Redwings are unable to bear hard weather so well as the Fieldfares. While in this country, the Redwings inhabit parks and pleasure-grounds that are ornamented with clumps of trees; and, like the Thrush, which they most resemble in external appearance, they seek their subsistence in mild and open weather in pasture lands and moist meadows, feeding principally on worms, snails, and other soft-bodied animals. They are much less inclined to feed on berries than most of the other species of this genus; and should the resources usually obtained by their search on the ground be closed against them by long-continued frost and snow, the Redwings are the first among birds to suffer, and during some severe seasons, such as 1799, 1814, and 1822, hundreds have been found almost starved, alike unable to prosecute their journey further south to more congenial countries, or to bear the rigour of this.

It is worthy of notice, as an instance in the economy of nature, that many birds feed without hesitation or prejudice on berries that are said to be injurious to man.

After the winter is over, during which the Redwings frequently visit for a time the most southern parts of Europe, namely Sicily and Malta, and were seen by Mr. Strickland at Smyrna, they return in flocks to the more central portions, where they remain till the gradual advance of the season induces them to continue their journey northward. Mr. Blyth has seen and heard them in Surrey, Mr. Doubleday in Essex, and Mr. Williamson in Yorkshire, as late as the month of May; and White of Selborne remarks, that one very cold and backward season they lingered in Hampshire till June. An instance is recorded of the nest of this bird being taken near Barnet in Middlesex; another has occurred near Godalmin in Surrey. A few Redwings have been observed to remain all the summer in Aberdeenshire; and Dr. Fleming states, that "Mr. Bullock, in a letter to him dated the 23rd April 1829, mentioned the circumstance of the Redwing's breeding in Harris, one of the Hebrides, where he had observed it in the preceding summer."

Monsieur Vieillot, the well-known French naturalist, says the Redwing builds in trees in the environs of Dantzick.

In Sweden, M. Nilsson states that this bird breeds in moist woods in June, and that the eggs are six in number, blue, spotted with black. In Norway, Mr. Hewitson remarks that "the Redwing was but seldom seen, and then perched upon the summit of one of the highest trees, pouring forth its delightfully wild note. It was always very shy, and upon seeing our approach would drop suddenly from its height and disappear amongst the underwood. Its nest which we twice found with young ones, (although our unceasing endeavours to obtain its eggs were fruitless,) was similar to that of the Fieldfare, but nearer the ground.

"The Redwing is called the Nightingale of Norway; and well it deserves the name."

Linneus, several times in his Tour in Lapland, notices the song of the Redwing, "whose amorous warblings from the top of the spruce fir were delightful. Its high and varied notes rival those of the Nightingale herself."

During summer the Redwing advances even farther north than the Fieldfare, visiting the Faroe Islands and Iceland; it is found also in Russia; but it leaves these northern countries as winter approaches, and extends its migration over central Europe as already mentioned.

The beak is brownish black, except at the base of the under mandible, where it is pale yellow brown; the top of the head, the upper surface of the neck, the back, rump, upper tail-coverts and tail-feathers, uniform clove-brown;

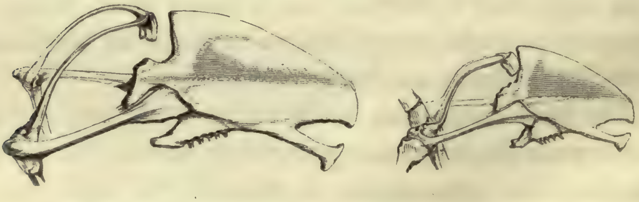
wing-feathers a shade darker, but with lighter-coloured external edges: from the beak to the eye, and the ear-coverts, clove brown; over the eye a streak of pale wood-brown; the irides hazel: the chin, throat, belly, vent-feathers, and under tail-coverts, dull white; sides of the neck, upper part of the breast, and the flanks, dull white, tinged with wood-brown, and streaked longitudinally with clove-brown; under surface of the great wing and tail-feathers ash-grey; sides of the body, under wing-coverts, and axillary feathers, bright reddish orange, from which peculiarity the bird has derived its name: legs pale brown; toes and curved claws darker brown.

The whole length of the Redwing is about eight inches and three-quarters. The wing from the carpal joint to the end of the longest primary measures four inches and three-eighths: the first feather very short; the second equal in length to the fifth; the third and fourth also equal in length, and the longest in the wing.

The plumage of the female Redwing is less bright than that of the male.

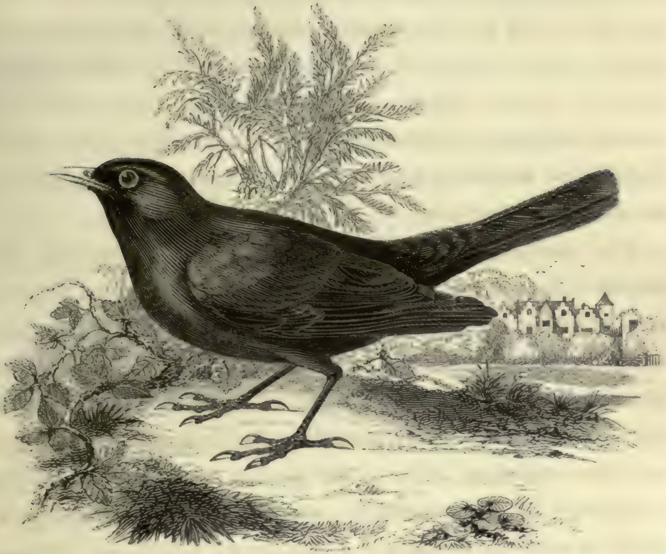
White and cream-coloured varieties of this bird have been obtained.

The outline vignette below represents the form of the breastbone of the Great Grey Shrike and the Spotted Flycatcher.



INSESSORES.
DENTIROSTRES.

MERULIDÆ.



THE BLACKBIRD.

Turdus merula.

Turdus merula,	*The Blackbird,*	Penn. Brit. Zool. vol. i. p. 411.
,, ,,	,,	Mont. Ornith. Dict.
,, ,,	,,	Bewick, Brit. Birds, vol. i. p. 125.
,, ,,	,,	Flem. Brit. An. p. 65.
Merula vulgaris,	,,	Selby, Brit. Ornith. vol. i. p. 167.
Turdus merula,	,,	Jenyns, Brit. Vert. p. 101.
Merula vulgaris,	,,	Gould, Birds of Europe, pt. viii.
Turdus Merula,	*Merle noir,*	Temm. Man. d'Ornith. vol. i. p. 168.

The Blackbird is a species so generally known that but little need be said of its habits or its haunts. Unlike most of the species of the genus to which it belongs, it is very seldom seen in flocks, and rarely more than two are to be observed in company. Numbers are bred in this country every season; and those thus reared, it is believed, do not migrate.

The Blackbird frequents hedges, thickets, plantations, and woods. They are shy, restless, and vigilant, frequenting the ground under cover of evergreens and other shrubs that serve to conceal them; and if disturbed they take wing with a vociferous chattering cry of alarm, and after a short flight turn suddenly into some thick brake or hedgerow to avoid further pursuit.

The food of the Blackbird varies considerably with the season. In the spring and early part of the summer it consists of the larvæ of insects, with worms and snails, the shells of which are dexterously broken against a stone to get at the soft body of the animal within: as the season advances, they exhibit their great partiality for fruit of various sorts, and their constant visits to the garden bring upon them the vengeance of the gardener, whose gun is ever ready at hand to repel or destroy the numerous intruders. When, however, the enormous number of insects and their larvæ, with the abundance of slugs and snails, all injurious to vegetation, which are eaten by Blackbirds throughout a great portion of the year, are duly considered, it may fairly be doubted whether the value of the fruit is not counterbalanced by services performed, and I join in the recommendation of the compassionate author of the poem on the Birds of Scotland, who says,

> "Scare, if ye will, his timid wing away,
> But, O, let not the leaden viewless shower,
> Vollied from flashing tube, arrest his flight,
> And fill his tuneful, gaping bill with blood."
>
> GRAHAME.

The song of the Blackbird is more remarkable for power and quality of tone than for compass or variety. It is usually much too loud except for the open air, and the same notes are too frequently repeated. This bird commences his song early in the spring; and it has been observed that he occasionally sings his best strain during the continuance of a warm April shower. He continues singing at intervals throughout the summer, and till the regular moulting of the season commences.

Like some other birds gifted with great powers of voice, the Blackbird is an imitator of the sounds made by others. He has been heard to imitate closely part of the song of the Nightingale; three or four instances are recorded of his having been known to crow exactly like the Common Cock, apparently enjoying the sound of the responses made by the fowls of the neighbouring farm-yard; and Mr. Neville Wood, in his British Song Birds, has mentioned an instance in which he heard a Blackbird cackle as a hen does after laying.

The Blackbird pairs and breeds very early in the spring, generally choosing the centre of some thick bush in which to fix and conceal the nest. The outside is formed of coarse roots and strong bents of grass, plastered over or intermixed with dirt on the inner surface, forming a stiff wall: it is then lined with finer bents. The eggs are four or five in number, sometimes, but rarely, six, of a light blue colour, speckled and spotted with pale reddish brown: the eggs of the Blackbird are occasionally found of a uniform blue, without any spots whatever; the length of the egg one inch two lines, the breadth ten lines. The first brood of young are hatched by the end of March, or early in April.

The Blackbird is very generally distributed. It is found over the whole of the counties of the South of England from Sussex to Cornwall, it is common in Wales; and, according to Mr. Thompson of Belfast, it is very common and constantly resident in Ireland: it is found also in the northern counties; and in Northumberland, Mr. Selby says that "about the beginning of November vast flocks of Blackbirds make their appearance upon our coasts, from more northern countries. They remain but a few days to recruit, and then resume their flight in a south-westerly direction."

The Blackbird is also found over Scotland. Mr. Selby saw it in Sutherlandshire in June 1834; and it is recorded as inhabiting the Hebrides, Orkneys, and Shetland.

In Sweden, Professor Nilsson says it is common everywhere; and Mr. Hewitson and his party saw it occasionally in Norway. From the northern parts of Europe it is spread southward over the whole of the European continent to Italy, Corfu, Sicily, and Malta, and is known to go from thence to North Africa. According to M. Temminck, the Blackbird also inhabits the Morea; and Mr. Charles Darwin saw it as far to the westward as Tercera, one of the Azores.

The beak and the edges of the eyelids in the adult male are gamboge-yellow: the whole of the plumage black; under surface of the wings shining greyish black; the legs and toes brownish black; claws black.

The whole length of the bird about ten inches. The wing from the carpal joint to the end of the longest primary four inches and seven-eighths: the first feather very short; the second not quite so long as the fifth, but longer than the sixth; the third, fourth, and fifth feathers, equal in length, and the longest in the wing.

In the female, all the plumage of the upper surface is uniform umber brown; the chin, throat, and upper part of the breast, reddish yellow brown, with a few darker-coloured spots; belly, sides, and under tail-coverts, hair-brown.

The young have the upper parts blackish brown, darker in the males, each feather having a central spot or streak of pale rufous: under parts light rufous brown, with terminal dark spots, generally more distinct in the males.

Young males having completed their first autumn moult, are intermediate in the general colour of their plumage between that of the adult female and adult male, the yellow also beginning to appear at the point of the beak.

Having stated at page 166 some of the laws which appear to govern the assumption and changes of colour in the plumage of birds, I may here add a few remarks on the disposition and situation of the feathers themselves. It is not, however, my intention to attempt to describe the structure and growth of a feather, one of the most complicated of all the various productions of the skin in animals; such minute anatomical details would be out of place in a work intended to be popular, but the reader who is inclined to pursue this part of the subject may consult with advantage the "Developement of Feathers," by F. Cuvier, in the Mémoires du Museum, tom xiii; or the article "Aves," in the first volume of the Cyclopædia of Anatomy and Physiology by Professor Owen.

In young birds the first feathers are preceded in their passage through the skin by filaments of down; but after the first plumage, at the regular period of moulting, each old feather is the pioneer of that which is to follow. The natural moult proceeds by degrees, and the large quill-feathers of the wings and tail are generally shed by pairs.

"Although the feathers of birds appear to be an entire and uniform covering, they do not arise equally from every part of the body, but only from such parts of the skin as are least liable to be affected by the motion of the contiguous parts, such as the action of the limbs.

"The feathers arise pretty equally on the head where there is no motion; and along the back, on the wings between joint and joint; as also on the thighs and legs; the whole forming a kind of partial coat of mail. As they do not arise from every part of the skin equally, they must be proportionately thick-set where they do arise.

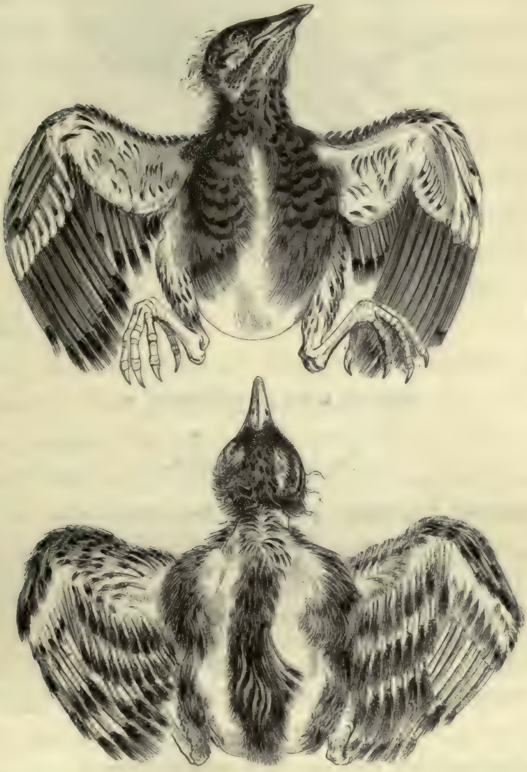
"The places of origin of feathers are very observable in a bird that has been plucked; but still more so in young birds just feathering, more especially of such as have but little down, and of which the clumps of feathers, from their colour, as in the young Blackbird, present a great contrast with the skin.

"In the interstices of the clumps of feathers, there are others disposed irregularly, but so sparingly as not to interfere with the motion of the part."

The four preceding paragraphs, and the two representations of the young of the Blackbird, while assuming the first or nestling feathers, are taken from the Descriptive and Illustrated Catalogue of the Physiological Series of Comparative Anatomy, contained in the Museum of the Royal College of Surgeons in London, Part II. vol iii. page 311.

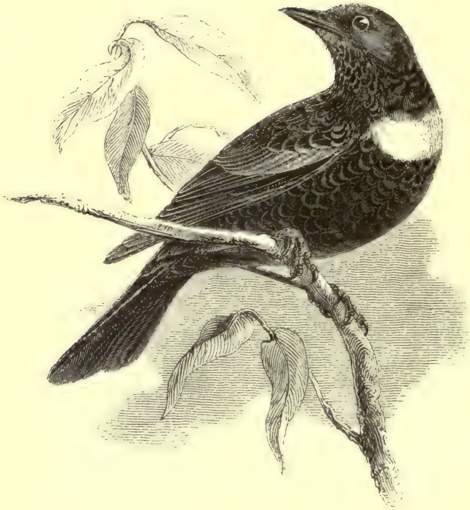
The upper figure shows the lines of young feathers on the side and under part of the lower mandible; the long line of feathers down each side of the breast, which by their growth and extension outwards and downwards cover the principal part of the under surface of the body; the extended line of flight feathers, partly concealed by the bend of the wing, and above them the various under wing-coverts.

The lower figure shows the long line of feathers covering the brain, and the whole length of the spinal column; those on the sides of the body over the shoulders, called the scapularies; and the rows on each wing over the flight feathers, forming the lines of the greater and lesser wing-coverts.



INSESSORES.
DENTIROSTRES.

MERULIDÆ.



THE RING OUZEL.*

Turdus torquatus.

Turdus torquatus,	*Ring Ouzel,*	PENN. Brit. Zool. vol. i. p. 415.
,, ,,	,, ,,	MONTAGU, Ornith. Dict.
,, ,,	,, ,,	BEWICK, Brit. Birds, vol. i. p. 127.
,, ,,	,, *Thrush,*	FLEM. Brit. An. p. 65.
Merula Torquata,	,, *Ouzel,*	SELBY, Brit. Ornith. vol. i. p. 169.
Turdus Torquatus,	,, ,,	JENYNS, Brit. Vert. p. 101.
Merula Torquata,	,, ,,	GOULD, Birds of Europe, pt. ix.
Turdus Torquatus,	*Merle à plastron,*	TEMM. Man. d'Ornith. vol. i. p. 166.

---

* Ousel, or Ouzel, from *Oisel,* old French.—*Nare's Glossary.*

The Blackbird is also sometimes called Ouzel and Ousel. Thus Shakspeare says—

"The Ousel cock, so black of hue,
With orange tawny bill."

Mids. N. Dr. iii. 1.

The Ring Ouzel is a summer visitor to the British Islands; and although its migrations are decidedly opposite as to season to those of the Fieldfare and Redwing, which visit us in winter, all three pass the coldest weather in the warmer parts of Europe, and the countries a little farther to the south of it, and all three likewise pass the summer in the more central or northern parts.

The Ring Ouzel arrives in this country from the south in the month of April, and appears to prefer the extreme western and northern portions of these islands, visiting the wilder rocky and mountainous districts generally. They breed, it is said, on Dartmoor every year; and Mr. Eyton has noticed that they are by no means rare birds in Wales, particularly on the Berwyn chain of mountains near Corwen. According to Mr. Thompson,* they are distributed generally over Ireland; and the birds are seen every spring in Devonshire and Cornwall, on their passage, probably, to these breeding-grounds.

They are seen in Surrey, Kent, Essex, Suffolk, and Norfolk, both in spring and autumn; and from the circumstance of a specimen having been shot early in the month of August 1836 near Saffron Walden, it was conjectured the bird had been bred in that neighbourhood. In 1804, a pair built in a garden at Lowestoff; but their nests are much more frequent in the northern counties. Mr. Allis of York tells me that it breeds in the higher moorlands of Yorkshire: and the eggs of this bird in my own collection were sent me by Mr. Leyland of Halifax. They are known to breed also in Derbyshire. Mr. Selby, in his Catalogue of Birds of the county of Northumberland, says it is common in summer throughout the Cheviot range, and the higher parts of Cumberland and Durham. At the meeting of the

---

* Mag. of Zool. and Bot. vol. ii. p. 438.

Berwick Naturalists' Club in September 1834, Mr. Armstrong mentioned having procured the nest of this bird from the hills in the neighbourhood of Wooler. The Ring Ouzle breeds also in various parts of Scotland. Dr. Fleming says it is not rare on the Pentland Hills near Edinburgh; and Mr. Rennie has seen their nests in a wild of mountainous country behind Carntable in Argyleshire. In Sutherlandshire, Mr. Selby found the bird abundant in June 1834 in all the mountainous parts; and Mr. Bullock exhibited, in his collection at the Egyptian Hall, a male, female, nest, and eggs, taken in the Hebrides; but I do not find any record of this bird frequenting Orkney or Shetland.

The Ring Ouzel visits Denmark and Sweden. In the latter country M. Nilsson considers it a rare bird, which, he says, arrives in April and departs in autumn. Of the Ring Ouzel in Norway, Mr. Hewitson says it was often seen, "frequenting many of the wooded rocks, and enlivening the most bleak and desolate islands with its sweet song. It shares with the Redwing the name of Nightingale, and often delighted us in our midnight visits amongst the islands." Further north than this the Ring Ouzel does not appear to venture; nor is it found in Siberia or in Russia.

In its appearance the Ring Ouzel resembles the Blackbird; but it frequents wild and hilly uncultivated tracts of country, rather than those which are enclosed and inhabited. They fly rapidly, are shy and difficult of approach, unless you are near their nest, when they become bold and clamorous, endeavouring by various arts to entice the intruder to follow them away from their treasured eggs or young.

The nest is generally built on or near the ground, sometimes on banks by the sides of streams, occasionally placed at the base of a stone, a stump, or a bush, which serves as a shelter. Dr. Fleming says that in Scotland it makes its nest among heath; and the nests seen by Mr. Rennie in Argyleshire were placed on the sides of heathy banks, not under a bush. The nest, according to Mr. Hewitson, though differently situated, "is very similar to that of the Blackbird, being outwardly composed of coarse grasses, with a slight layer of clay, and thickly lined with fine dry grass:" the eggs four or five in number, of a light blue, speckled and spotted with reddish brown; the length one inch two lines, and ten lines in breadth. Mr. Heysham of Carlisle has seen the young birds, in that vicinity, fully fledged on the 15th of June.

The food selected by this species is similar to that sought for by the Blackbird. It consists of snails, insects, fruit, hawberries before the birds leave us for the winter, and ivy-berries when they return in the spring. Sir William Jardine, in a note to an edition of White's Selborne, says of these birds, "Before migrating to their winter-quarters, and often ere the duties of incubation are over, they leave their mountainous haunts, and descend to the nearest gardens, where they commit severe depredations among the cherries, gooseberries, &c. They also frequent holly-hedges and the mountain-ash, whenever the fruit of these trees is so early as to be of service during their passage. They are known to the country-people under the title of Mountain Blackbird." Buffon says, they feed largely on grapes in France, and are themselves, at that time, delicious eating: he adds also, that, in consequence of their habit of forming their nests on the ground, they are sometimes called *Merles terres.* These birds visit gardens in the vicinity of the Forest of Orleans. The voice of the Ring Ouzel possesses, according to Mr. Selby, a few clear and powerful notes: its cry of alarm, when disturbed, very closely resembles that of the Blackbird.

The Ring Ouzel is not unfrequently seen in flocks of twenty or thirty about the end of October along the line of our southern coast, when preparing for their departure. To the Rev. Robert Holdsworth, of Brixham, I am indebted for a series of letters containing notes on the Natural History of Birds and Fishes in Devonshire. From this gentleman I learn that flocks of Ring Ouzels appear in October, for about a fortnight, near Berry-head, the Bolt-headland, and the Start Point, and are then seen no more that year. Farther to the eastward, at the Island of Portland, where these birds assemble, they are called Michaelmas Blackbirds; and the Isle of Purbeck is another starting-place. White of Selborne saw them frequently when on their route in Hampshire and Sussex. These flights probably go to France and Spain, and from thence to North Africa, where they pass the winter.

A specimen is occasionally obtained near London. A female bird, in my own collection, given me by my friend Mr. Arthur Vardon, was caught in a trap in his garden at South Lambeth; and a young male bird of the year was shot out of a small flock on Wimbledon Common in October last by Mr. Larkham of Roehampton.

From our eastern coast these birds probably cross the Channel to Germany. They are rare in Holland, but common in France. They breed in the mountains of Switzerland, and are seen on the higher mountains of Arragon. They are sometimes abundant in winter at Genoa and in Italy; but a great portion pass over to Africa, Egypt, and Syria.

The adult male has the point of the beak almost black, with more or less of yellow at the base; the irides dark brown; the head, neck, back, upper tail-coverts, wings, and tail-feathers, nearly uniform brownish black; the feathers of the body edged with blackish grey; the external margins of all the wing-feathers grey, but this lighter colour is broadest on the edges of the tertials; the chin, throat, breast, belly, and under tail-coverts are of the same colour as the upper surface of the body, but across the chest there is a broad crescentic stripe of pure white: the legs, toes, and claws, brownish black.

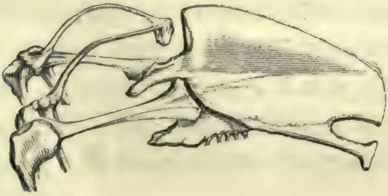
The length of an adult bird is about eleven inches. The wing, from the carpal joint to the end of the longest primary, five inches and a half: the first feather of the wing very short; the second equal in length to the fifth; the third and fourth feathers also equal, and the longest in the wing.

The female is rather lighter in colour than the adult male, and the grey margins of the feathers are broader; the band across the chest is narrower; the white colour is less pure, and clouded with reddish brown and grey.

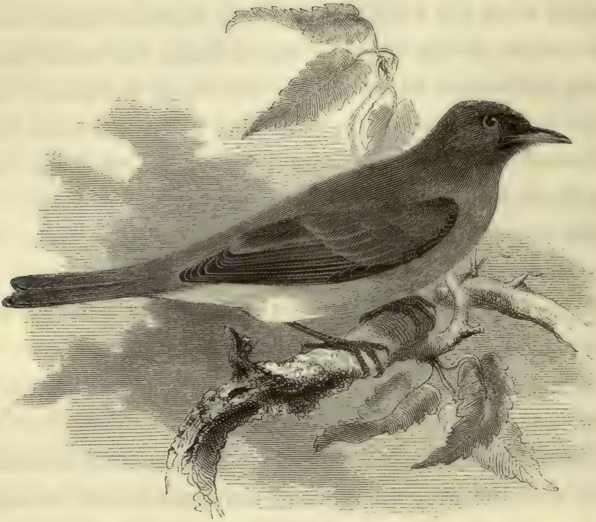
Young males resemble the adult female; but in young females the pectoral gorget is scarcely perceptible.

Specimens without the white crescent have been called Rock-thrushes. White, and some otherwise marked varieties, are said to have occurred.

The vignette represents the form of the breast-bone of the Common Dipper.



INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



GOLD-VENTED THRUSH.

Turdus aurigaster.

Turdus aurigaster,		Vieillot Encyclop. Method. p. 657.
	Le Culdor,	Le Vaillant, Ois. d'Afriq. vol. iii. p. 46. pl. 147. f. 2.
Turdus chrysorhæus,	,,	Temm. Plan. Color.
,, ,,	,,	Lesson, Man. d'Ornith. t. 1. p. 231.
	Gold vented Thrush,	Latham. Gen. Hist. v. 5. p. 82. sp. 75.
Hæmatornis ,,		Swainson, Class. of Birds, v. 2. p. 228.
Pycnonotus ,,		Thompson, Ann. Nat. Hist. vol. 15. p. 308.

In the month of January 1838, this rare African Thrush was shot at Mount Beresford, three and a half miles from Waterford, by a lad while out shooting Blackbirds; he considered it a hen Blackbird, and sold it to Dr. Robert Burkitt of Waterford, who skinned and preserved it; the sex, however, was not noted. In 1843 Dr. Burkitt sent the specimen to Wm. Thompson, Esq., for exhibition in the Natural History Section of the British Association, then about to hold a meeting at Cork, and the subject is noted in the Published Report of the thirteenth meeting, in that part of the volume devoted to the Transactions of the Sections, page 71.

Dr. Burkitt has most kindly allowed me the use of his bird for my work on the present occasion, and the figure at the head of this subject, and the description to be added, were taken from this British killed specimen.

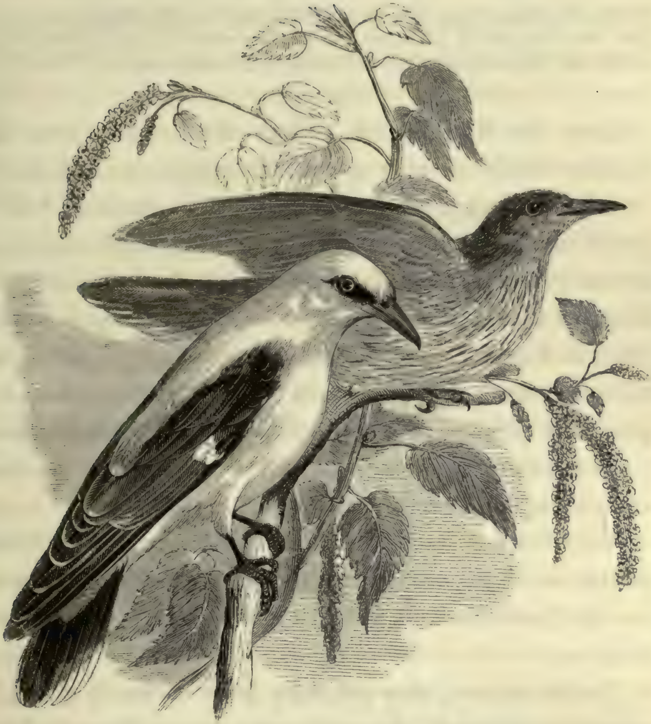
But little is known of the habits of this species by the various authors whose names and works are here quoted. By Le Vaillant, who has given a coloured representation of the male, it is stated that Klaas, the faithful companion of his travels, shot this species on the banks of the Grootvis river, in the Caffre country. This example, which was found to be a male, was accompanied by another of the same species, but Le Vaillant's fellow-traveller having only a single barrelled gun, the other bird, which was probably a female, escaped while he was reloading. They afterwards saw no more birds of this species, not even the female in question, although they searched the district in which the male was killed for several days.

Dr. Latham, in the fifth volume of his General History, when noticing this species, observes, that in the collection of Sir J. Anstruther are several drawings of this bird, where it is called the Bulbul (Nightingale) of Calcutta; but the bird thus referred to by Dr. Latham, which is figured in Brown's Illustrations of Zoology, plate 31, though somewhat resembling Le Vaillant's bird, is yet a different species, as comparisons of the figures and descriptions appear to me to prove. These African and Indian

Thrushes have been grouped to form various genera; the African species included by Mr. Swainson in his genus *Hæmatornis*, appear to be closely allied in characters to those of the genus *Ixos* of M. Temminck, as given in the fourth part, or volume of his Manual, page 606, one species of which, called *Ixos obscurus*, has, according to M. Temminck, been found in Andalusia, where it is said to be common, and that it also inhabits North Africa. Of this bird I have seen a drawing in the possession of Mr. Gould, and, from the representation, this species has all the appearance of belonging to the same group as the *Ixos plebeius* of Dr. Ruppel, found in North Africa, and those of Le Vaillant from South Africa. Of the habits of the Culdor, or Gold-vented Thrush, as before mentioned, nothing is known that I am aware of.

The beak black; the irides probably dark brown; the head, neck, back, wings, and tail-feathers, uniform umber brown; the feathers on the forehead and crown slightly elongated, forming a crest when elevated, the plumage of the whole head being a shade darker in colour than those of the body; throat and neck in front clove brown, becoming lighter on the breast, and passing into a dull white on the belly; vent and under tail-coverts brilliant king's yellow; legs, toes, and claws, black. The whole length of the bird seven and a half inches; the wing, from the anterior joint to the end of the longest quill-feather, three and a half inches; the first quill-feather very short, about one inch in length; the second three-quarters of an inch longer than the first, but shorter than the third: the fourth feather the longest in the wing; the tail very slightly forked.

INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



THE GOLDEN ORIOLE.

Oriolus galbula.

Oriolus galbula,	*Golden Oriole,*	PENN. Brit. Zool. vol. i. p. 303.
,, ,,	,, ,,	MONT. Ornith. Dict.
,, ,,	,, ,,	BEWICK, Brit. Birds, vol. i. p. 109.
,, ,,	,, ,,	FLEM. Brit. An. p. 66.
,, ,,	,, ,,	SELBY, Brit. Ornith. vol. i. p. 176.
,, ,,	,, ,,	JENYNS, Brit. Vert. p. 102.
,, ,,	,, ,,	GOULD, Birds of Europe, pt. ii.
,, ,,	*Le Loriot,*	TEMM. Man. d'Ornith. vol. i. p. 129.

ORIOLUS. *Generic Characters.*—The form of the beak is that of an elongated cone, but slightly depressed at the base; upper mandible ridged above, notched at the point. Nostrils basal, lateral, naked, pierced horizontally in an extended membrane. Wings of moderate size, with the first feather short; the second feather not so long as the third, which is the longest in the wing. Feet with three toes in front, one behind; tarsi shorter or only as long as the middle toe; the outer toe joined at its base to the middle toe.

LIKE the Ring Ouzel, though much more rare, the Golden Oriole is also a summer visitor to Britain, an occasional straggler being now and then obtained, but always between spring and autumn. This bird makes its annual visit to the European continent from the countries south of the Mediterranean in the month of April, and returns in September. It is in April that a specimen is sometimes obtained on our southern coast; and from those that pass over France and Germany in a north-western direction, an example is occasionally procured in the maritime counties of our eastern coast.

Very little is known of the habits of the Golden Oriole in this country; but greater facilities for observation occur on the Continent, and in Italy particularly these birds are common.

Bechstein says, they generally frequent lonely groves, or the skirts of forests, always keeping among the most bushy trees, so that it is rarely seen on a naked branch. They always frequent orchards in the fruit season. M. Vieillot also says that they frequent wooded countries, are shy and difficult to approach. These birds, he says, are sometimes deceived by an expert sportsman, who advances towards them whistling their note; but the ear of the bird is so correct, that a single mistake, or false note, made in the imitation of his song, is a sufficient hint to the bird, and he takes wing instantly. Mr. Swainson, speaking of the habits of the Orioles generally, says, they live in small flocks, fly well, and frequent high trees, among the foliage of which they seek for caterpillars, soft insects, and fruits.

The Golden Oriole is the only European species of the genus, and its nest is very different in shape from those of some of its foreign congeners, which are elongated, purse-like, and pendant. The nest of the Golden Oriole is rather flat and saucer-shaped, generally placed in the horizontal fork of a bough of a tree, to both branches of which it is firmly attached. The materials used to form the nest are sheep's wool and long slender stems of grass, which are so curiously interwoven as mutually to confine and sustain each other. The vignette at the end of this article represents a nest of this bird, taken, by permission, from a specimen presented to the Zoological Society by Professor Passerini of Florence. Another nest of this bird, exactly resembling the one just referred to in form, materials, and structure, is represented by Mr. Meyer in his "Illustrations of British Birds," from a nest taken in Suffolk; and I have been told that Mr. Scales of Beecham Well had eggs of the Golden Oriole in his collection which had been taken in Norfolk. The eggs are usually four or five in number, one inch two lines long, and ten lines in breadth, of a white colour slightly tinged with purple, and with a few distinct spots of ash-grey and claret colour. The female is said to be so tenacious of her eggs as to suffer herself to be taken with the nest. A writer in the Naturalist mentions having seen a pair of young birds in nearly full plumage exhibited for sale in the public market at Cologne, for which he was asked the moderate sum of three shillings. Bechstein says that the parent birds rear but one brood in a season; which helps to account for the scarcity of this very handsome bird. The food of this species is various, consisting of insects and their larvæ, with figs, cherries, grapes, and other fruits in their season.

The voice of the Oriole is said to be loud: Bechstein considers it to be full and flute-like; its call-note, he says, is well expressed by the term *puhlo.* The Spaniards call this bird *Turiol;* the French, *Loriot;* the English, *Oriole;* —all of which are said to have some resemblance to the sound of the bird's call-note, and to have given origin to its name.*

In April 1824, a young male in its third state of plumage was obtained at Aldershot in Hampshire. When shot, it was in company with some Blackbirds. This specimen was purchased and preserved for the Rev. Dr. G. Thackeray, the Provost of King's College, Cambridge, by whom it has been most obligingly lent me for my use in this work. Two examples are recorded by Dr. Moore to have been killed in Devonshire. By a communication from Mr. Couch of Polperro, I find that several specimens have been obtained in Cornwall; Montagu, in his Supplement, also mentions two instances; and Mr. E. H. Rodd has sent me a notice of one shot in 1833 near the Land's End. Pennant has recorded one shot in South Wales. One was shot in Gorton Fields, near Manchester, in July 1811; and another was shot in Quermore Park, near Lancaster, which is now preserved in the Museum of that town. For this last communication I am indebted to Mr. T. Howitt. jun. From Mr. Thompson's contributions to the Natural History of Ireland, we find that five specimens have been obtained in different parts of that country since the year 1817.

---

* The generic term, however, like that of *Icterus,* for a genus closely allied is probably intended to have reference to the prevailing yellow colour of the birds.

Two birds, both males, were shot at Charleston, near Alfriston in Sussex, in the beginning of May 1833, as I learn from Mr. Wm. Borrer, Jun.; and two others have been taken in Kent.

In Surrey, the Golden Oriole has been seen near Walton by Mr. Meyer, whose name has been mentioned in reference to the nest; and a specimen of the bird was shot near Godalmin in 1833. In the summer of the same year, a fine example of this beautiful bird was seen for several successive days in the garden of William Harrison, Esq. at Cheshunt. Some years since, two of these birds were taken near Saxmundham in Suffolk, and were in the possession of Mr. Bright of that place. A male and female shot at Diss in Norfolk, in 1829, were in the collection of the Rev. Francis Henson at Cambridge. Other specimens have been obtained in Norfolk. I learn from the Rev. Richard Lubbock that one was killed at Hethersett, near Norwich, in April 1824, which is still preserved; and it is stated in the Transactions of the Linnean Society, that a pair of these birds built a nest in the garden of the Rev. Mr. Lucas of Ormsby. Mr. Selby mentions an instance of a female that was killed in a garden at Tynemouth in Durham, which is also stated by Mr. Bewick; but this bird does not appear to have been seen in Scotland, or on its islands. M. Nilsson says that it occasionally breeds in Sweden.

In Germany, Holland, and France, this bird is not uncommon; and it is still more numerous in Spain, Provence, and Italy. Edwards, the English naturalist, had one sent him that was shot on the rock of Gibraltar; and the Zoological Society have received it from Tangiers. At Sicily and Malta, these birds arrive in September on their way back to pass the winter in Africa; and the Zoological

Society have received specimens from Tunis, Egypt, Smyrna, Trebizond, and Erzeroom.

The adult male has the beak orange brown; from the base of the beak to the eye a dark-coloured streak; irides lake red: the whole of the head, neck, and body, above and below, with the upper and under tail-coverts, bright gamboge yellow; the wings black; the ends of the feathers of the spurious wing yellow; the outer edge of the primaries, and the tips of the secondaries and tertials, yellowish white; upper surface of the two middle tail-feathers black, tipped with yellow; the outer tail-feather on each side has its basal half black, the remaining portion yellow: in the tail-feathers on each side between the outside feather and those in the centre, the black colour occupies a larger space in each successively; the tail in form is slightly rounded: under wing-coverts yellow; under surface of the quill-feathers and the dark part of the tail-feathers, greyish black; legs and toes lead colour; the claws, like the beak, orange brown.

The whole length of the bird is nine inches and a half. From the carpal joint to the end of the longest feather in the wing, six inches and a quarter: the first wing-feather not quite half as long as the second; the second not so long as the fourth, but longer than the fifth; the third feather the longest in the wing.

The female has not the dark streak between the beak and the eye; the upper surface of the plumage is oil-green; upper tail-coverts greenish yellow; wing-coverts brocoli-brown; the quill-feathers blackish brown; the ends of the spurious wing-feathers tipped with white; outer edges and ends of the quill-feathers margined with dull white: upper surface of tail-feathers brocoli-brown, tinged with yellow at the base, streaked and tipped with brighter yellow;

throat, breast, and under surface of the body, dull greyish white, streaked longitudinally with dark brown on the shafts of the feathers ; sides of the body and flanks yellow, streaked with dark brown ; under tail-coverts pure yellow ; under surface of tail-feathers yellow mixed with dull grey.

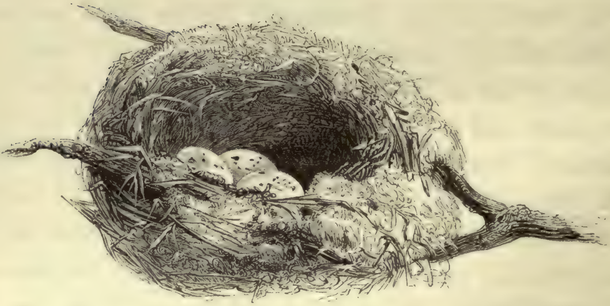
According to Mr. Macgillivray, " the young, in its first plumage, is of a dusky yellowish grey tint above, each feather having the central part greyish brown ; the lower parts yellowish white, each feather with a central brown line ; the sides and lower tail-coverts bright yellow ; the wings and tail brown, marked with yellow, as in the adult. The male is easily distinguished from the female by its lighter colour." The irides are brown ; the beak dark grey.

After the first moult, the young resemble old females.

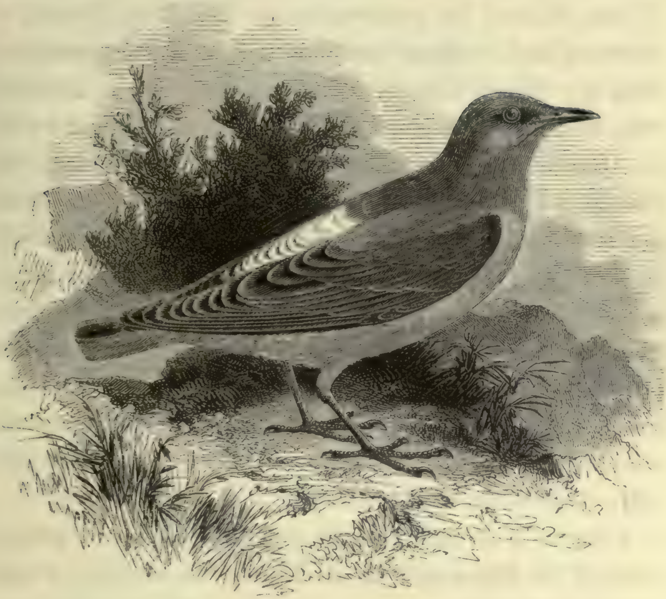
In the Rev. Dr. Thackeray's British killed specimen, which had not attained the truly adult male livery, the upper surface of the body is tinged with wine yellow : the scapulars and a few feathers on the centre of the back streaked with black ; the wings not so decidedly black : the spurious wing-feathers are slightly tipped with greyish white, not bright yellow, on the distal half of their length, as in the old male first described ; the quill-feathers with narrow lighter-coloured outer margins and tips : the feathers of the tail have the proximal two-thirds black, the rest yellow : under surface of the body yellow, tinged with green, and still retaining faint indications of darker streaks in the direction of the shafts of the feathers.

Mr. Hoy agrees with me in considering that the male does not obtain its brilliant yellow and black plumage until the third year. This gentleman in one of his letters states, " some pairs are observed breeding, in which you can scarcely distinguish male from female ; others still further advanced, but the plumage is not bright." This, it will be observed, is in accordance with the descriptions here given as those of the second and third summer.

The Oriole so frequently received from India, *Oriolus aureus*, which is by some considered to be identical with the bird under description, is, however, distinct, and may be immediately recognised by having the dark mark *behind* the eye, reaching to some distance above the ear-coverts; the wing is also much shorter, not reaching near so far towards the end of the tail.



INSESSORES. *MERULIDÆ.*
DENTIROSTRES.



THE ROCK THRUSH.

Petrocincla saxatilis.

Petrocincla saxatilis, Rock Thrush, Vigors, Zool. Journ. v. 2, p. 396.
„ „ „ „ Gould, Birds of Europe, pt. ii.
Turdus „ *Merle de Roche,* Temm. Man. d'Ornith. vol. i. p. 172, v. iii. p. 102.

Petrocincla. *Generic Characters.*—Beak stout, straight, the ridge arched towards the point. Nostrils basal, round, partly covered with hairs. Wings of moderate length ; the first quill feather very short, the third the longest, the second a little shorter than the third. Feet of moderate size, rather strong. Tail feathers equal at the end.

The beautiful specimen of the Rock Thrush figured above, was obtained on the 19th of May 1843, by Mr.

Joseph Trigg who shot it at Therfield near Royston, in Hertfordshire, while it was sitting on an ash tree in the evening of the day mentioned. I saw the specimen before it was skinned for preservation by Mr. John Norman of Royston, and received the first notice of the occurrence from my friend Thomas Wortham, Esq., whose influence with Mr. Trigg obtained for me the loan of the bird for my use in this work, and I beg to return my best thanks to all the parties, for the opportunity thus afforded me of figuring and describing the first example of the Rock Thrush that has been known to occur in this country. I have now very recently heard of another specimen shot by a gamekeeper, who not aware of the interest attached to such a bird, saved only the head and neck, but this portion having been shown to a gentleman conversant with ornithology, the species was identified without difficulty from its peculiar colouring.

The habits of this Thrush, and the localities it prefers, induced M. Temminck in his Manual, to separate it and some others of the same character, from the true Wood or Sylvan Thrushes, and to include them in a distinct and separate section. Mr. Vigors, carrying out this view still farther, proposed for this group of ground Thrushes the generic title and characters here adopted, and named the Rock Thrush as the typical species of his new genus. These birds inhabit rocky and mountainous countries, their stout legs and short tails, as compared with the Wood Thrushes, enabling them to traverse rough ground with ease. They frequent the wildest parts of rocky countries, and are found in summer on the Uralian mountains, the Alps and Pyrenees; they inhabit Germany, France, Switzerland and the Tyrol; they are found in several parts of Spain, particularly the rocky districts about Aragon; they breed also in Provence and in the north of Italy, retreating as winter approaches, to Sicily, Turkey, the Grecian Archipelago, and have been killed on very high mountains in Algeria.

The male bird is an excellent songster, his notes resembling those of the Blackcap Warbler, and this bird has been known to live five years in confinement, singing even at night if a candle was placed near the cage. In its natural state, the Rock Thrush is a very shy bird, and difficult of approach, avoiding pursuit, and settling on the upper parts of pointed rocks, from which it is able to command the view all around. The pair make their nest in a fissure of the rock, or among the loose rough masses at the base, and M. Temminck states that the nest is constructed of moss, in which four eggs are deposited of a greenish blue colour, without spots.

I have followed Mr. Vigors in placing this bird near the Alpine Accentor, and the similarity in some of their habits will be obvious. The Rock Thrush feeds upon insects and berries.

The male bird has the beak black, the irides hazel; the whole of the head and the neck all round bluish grey; upper part of the back the same, but passing into brown on the scapularies; the greater part of the back white, varied with a few bluish grey feathers; upper tail-coverts dark brown; tail-feathers chestnut brown, the two in the middle rather darker in colour, than the others; wings and wing-coverts dark brown, almost blackish brown; the greater wing-coverts and the secondaries tipped with white; the whole of the under surface of the body, and under tail-coverts light chestnut brown or bay; legs and toes dark reddish brown.

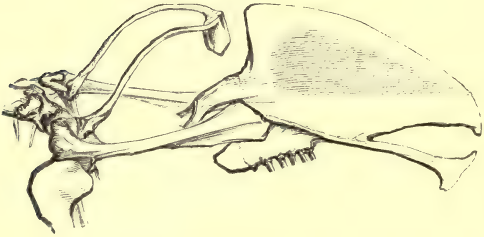
The whole length of the bird seven and a half inches;

the wing from the anterior joint to the end of the longest quill-feather four inches and three quarters.

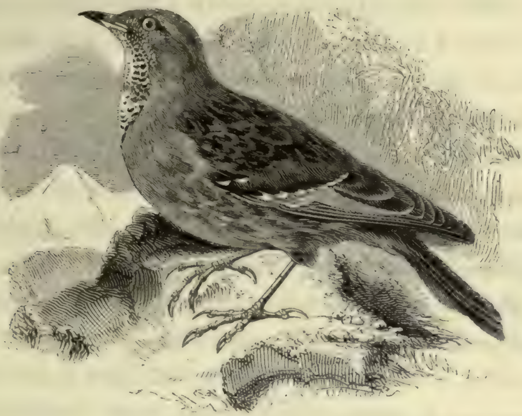
The female has all the upper surface of the body of a dull brown; on the back are some large white spots edged with brown; throat and sides of the neck pure white, some of the feathers occasionally varied with ash-brown; all the other under parts reddish white, with fine transverse lines at the end of each feather; tail light bay, the two middle feathers ash brown.

Young birds of the year, according to M. Temminck, differ remarkably. All the upper parts light ash brown, each feather terminated with a spot of greyish white. Quill-feathers tipped with white; wing-coverts edged with grey and tipped with white; tail red, tipped with white; under part of the body something like that of the adult female, but more varied with white, which is again intersected with brown lines.

The vignette represents the form of the breast-bone of the Blackbird.



INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE ALPINE ACCENTOR.

Accentor alpinus.

Accentor Alpinus, *Alpine Accentor*, Flem. Brit. An. p. 72.
" " " " Selby, Brit. Ornith. vol. i. p. 247.
" " " " Jenyns, Brit. Vert. p. 103.
" " " " Eyton, Rarer Brit. Birds, p. 11.
" " " " Gould, Birds of Europe, pt. xv.
" " *Accenteur des Alpes*, Temm. Man. d'Ornith. vol. i. p. 248.

Accentor. *Generic Characters.*—Beak of moderate length, strong, straight, conical, and pointed; the edges of both mandibles compressed, upper mandible notched near the point. Nostrils basal, naked, pierced in a membrane of considerable size. Wings—the first feather almost obsolete, the second nearly as long as the third, the third the longest in the wing. Legs strong; three toes before, and one behind; the outer toe joined at its base to the middle toe; the claw of the hind toe by much the longest, and the most curved.

By the kindness of the Rev. Dr. Thackeray, I am enabled to give a figure of the Alpine Accentor from the specimen killed in the garden of King's College, Cambridge, on the 22nd of November 1822. At that time two of these birds had been occasionally seen climbing the buttresses of the buildings, or feeding on the grass-plots of the garden, and were so tame, a character peculiar to the species,—that one of them, probably a male, was supposed to have fallen a victim to a cat: the other was shot; on dissection it proved to be a female, and the specimen was prepared and preserved for Dr. Thackeray's collection.

A second specimen has been killed in Essex; and the following notice of the occurrence appeared in Loudon's Magazine of Natural History for the year 1832, page 288, in a letter to the editor, as follows:—"Sir,—A few years since, I shot a small bird in a garden on the borders of Epping Forest, which I did not know, nor could any one tell me what it was, till within a fortnight a gentleman requested me to allow him to take it to London. He accordingly went to Mr. Gould, Naturalist, 20, Broad-street, Golden-square, who sends me an account of its being the *Accentor alpinus*, or Alpine Warbler, the only one known to have been killed in England, with the exception of one in Dr. Thackeray's garden at Cambridge. If any of your correspondents would like to see it, they can, by calling at my nursery, Wood Street Walthamstow.—I am, Sir, yours, &c. JAMES PAMPLIN. Whips Cross, Walthamstow, January 27th."

I am indebted to the Rev. Dr. Goodenough, the Dean of Wells, for a knowledge of the occurrence of a third example of this rare bird, which was shot in the garden of the Deanery in Somersetshire in 1833. Dr. Goodenough most obligingly offered to send this bird up to London for my use: but the loan of Dr. Thackeray's specimen rendered a second example unnecessary. I am not, however, the less happy to record my obligations for the favour intended.

The Alpine Accentor is not uncommon in Germany, France, Switzerland, Provence, and Italy, in which countries it frequents the highest elevations of the mountain districts during the summer, but seeking the shelter of the valleys to protect it from the storms of winter. It makes its nest among stones, or in cavities of the rocks, and sometimes on the roofs of houses, on the mountain-sides. The nest is formed of moss and wool, lined with hair from different animals. The eggs are four or five in number, of a fine light blue colour, like those of our Hedge Accentor, Dunnock, or Hedge-sparrow, as it is more commonly called, but larger, those in my own collection measuring eleven lines in length and eight lines in breadth. The vignette at the end of this article represents the nest.

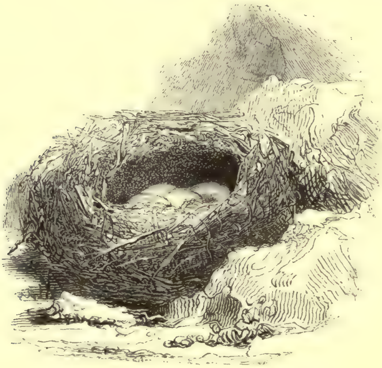
The food of this species consists of insects and seeds.

This bird on the Continent does not frequent bushes, nor perch on the branches of trees, like its generic companion the Hedge Accentor; but is almost always observed to be on rocks or on the ground, and is remarkable for its constant tameness, either from confidence or want of intelligence, being apparently regardless of man. The same character was noticed in the specimens both at Cambridge and at Wells, the birds allowing observers to approach unusually close to them, and when at length obliged to move, making very short flights, and always settling on some part of the nearest building. The resemblance of the steeple-crowned stone edifices of Cambridge, and at the Deanery of Wells, to the pointed and elevated rocks of their own peculiar haunts, were supposed to have been the attraction in both the localities referred to.

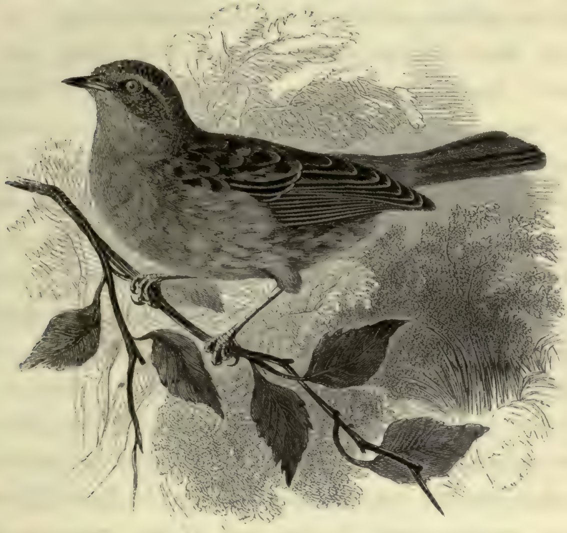
The beak is black at the point, and yellowish white at the base; the irides hazel: head, neck, and ear-coverts, brownish grey; feathers of the back brown, with longitudinal central patches of darker blackish brown; rump greyish brown; wing-primaries blackish brown, the centre of each tertial still darker, edged on both sides with reddish brown, and tipped with dull white; both the small and large wing-coverts reddish brown, varied with black, and tipped with a spot of white; upper surface of tail-feathers dark brown, tipped with buff: chin, throat, and front of the neck, dull white, with a small black spot on each feather; chest dark grey; the breast and flanks varied with chestnut-coloured patches: under tail-coverts dark greyish brown, edged with dull white; under surface of tail-feathers ash-grey, tipped with dull buffy white: legs and toes orange brown; claws black.

Length of the bird described six inches and a half. From the carpal joint of the wing to the end of the longest wing-feather three inches and five-eighths: the first feather very short, the second feather longer than the fourth, the third the longest in the wing.

The females do not differ in plumage from the males, except that their colours are not so bright.



INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE HEDGE ACCENTOR.

Accentor modularis.

Sylvia	*modularis,*	*Hedge*	*Warbler,*	PENN. Brit. Zool. vol. i. p. 509.
Motacilla	,,	,,	,,	MON. Ornith. Dict.
,,	,,	,,	,,	BEWICK, Brit. Birds, vol. i. p. 251.
Accentor	,,	,,	*Sparrow,*	FLEM. Brit. An. p. 71.
,,	,,	,,	*Accentor,*	SELBY, Brit. Ornith. vol. i. p. 248.
,,	,,	,,	,,	JENYNS, Brit. Vert. p. 103.
,,	,,	,,	,,	GOULD, Birds of Europe, pt. xvii.
,,	,,	*Accenteur*	*Mouchet,*	TEMM. Man. d'Ornith. vol. i. p. 249.

THE HEDGE ACCENTOR, or Hedge Warbler, better known to many by the name of Hedge Sparrow, is so generally diffused over the British Islands as to make any enumeration of particular counties unnecessary; except that although found in the Western Islands of Scotland, I have not met with any notice of it as a visitor to Orkney or Shetland.

In this country it is resident throughout the year, frequenting hedge-rows, gardens, and pleasure-grounds, from spring to autumn, where it feeds indiscriminately on insects in their various stages, worms, and seeds, but not on fruit ; drawing nearer to the habitations of men as winter approaches, to gain such scanty subsistence as chance or kindness may afford ; and Gilbert White of Selborne remarks, that it is a frequenter of gutters and drains in hard weather, where crumbs and other sweepings may be picked up. It is more frequently seen on the ground than elsewhere, is unobtrusive and harmless, and deserves protection and support.

Early in February the male may be heard singing his short and plaintive song ; but the voice of this little favourite, though sweet in tone, is deficient in variety as well as in power : yet his song may still be heard throughout the greater part of the year, if we except a short period in August when undergoing his annual moult. Mr. Knapp has observed that Hedge Warblers are almost always seen in pairs, feeding and moving in company with each other, and may truly, in a double sense, be considered domestic birds. Their nest, built of green moss, roots and wool, and lined with hair, is usually placed rather low down in a thick bush or hedge-row, and is generally finished early in March. As observed in the Journal of a Naturalist, "it is nearly the first bird that forms a nest ; and this being placed in an almost leafless hedge, with little art displayed in its concealment, generally becomes the booty of every prying boy ; and the blue eggs of the Hedge Warbler are always found in such numbers on his string, that it is surprising how any of the race are remaining, especially when we consider the many casualties to which the old birds are exposed from their tameness, and the young that are hatched from their situation."

In a nest thus easily found the Cuckoo is apt to deposit her egg, and Mr. Slaney says more Cuckoos are fostered by the Hedge Warbler than by any other bird.

The eggs of the Hedge Warbler are four or five in number, sometimes, though rarely, six, of a delicate and spotless bluish green colour; nine lines and a half in length, by six lines and a half in breadth. According to Mr. Jenyns, the first brood of young birds is hatched in April, and a second brood is reared in the season.

The Hedge Warbler goes as far north in summer as Sweden; but, according to M. Nilsson, most of them leave that country before winter. It inhabits all the temperate parts of Europe, but goes southward in autumn; it is even said to leave Genoa in October, but to be found in every hedge about Rome and the southern parts of Italy in winter. It is found in Sicily and Malta. Mr. Strickland obtained this bird at Smyrna in December; but it was considered rare in that locality.

The beak is dark brown, but lighter in colour at the base; irides hazel; head, nape, and sides of the neck, bluish grey, streaked with brown, except behind and below the ear-coverts, where the grey colour is unmixed with brown; back and wings reddish brown, streaked with dark brown; upper tail-coverts plain hair-brown; wing-primaries and tail-feathers dusky brown; tertials margined with reddish brown; chin, throat, and chest, grey; breast and belly buffy white; sides and flanks pale brown, streaked with dark brown; under surface of wings and tail-feathers greyish brown; the tail slightly forked: legs and toes orange brown; claws black; the hind claw as large again as either of the other three.

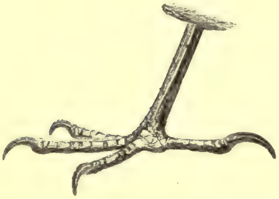
The whole length of the bird rather more than five inches and a half. From the carpal joint to the end of the longest feather in the wing, two inches and three-quarters: the first wing-feather very small; the second a little longer than the seventh, but shorter than the sixth; the third, fourth, and fifth feathers nearly equal in length, but the fifth rather the longest.

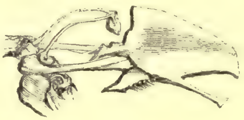
Females resemble the males, but are a little more spotted on the head, breast, and belly.

The young before their first moult have the throat greyish white, varied with small darker-coloured spots, and the general colour of the plumage of the other parts darker.

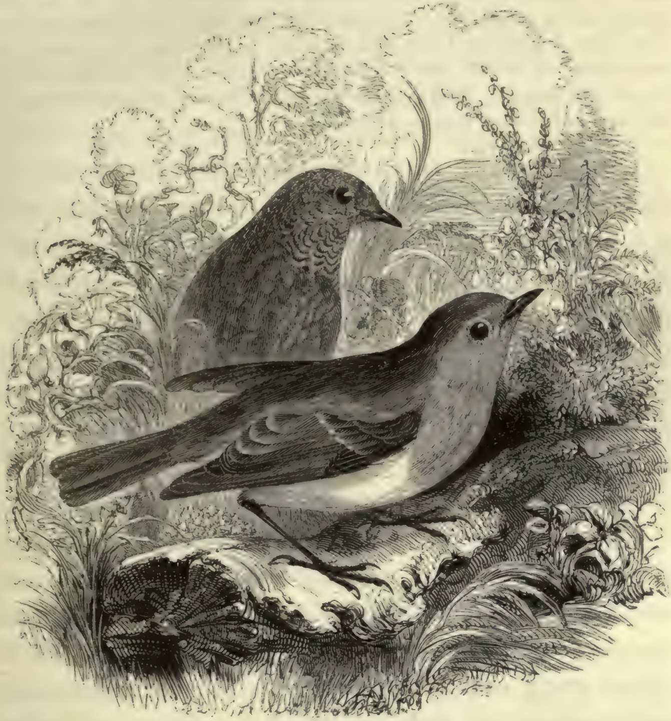
This species is subject to varieties in colour. A specimen sent me by the Rev. Dr. Thackeray has the head, neck, body, and wing-coverts dull white, varied with a few markings of the natural brown; the wing and tail-feathers pure white; beak and legs flesh colour. A specimen sent me by the Rev. Robert Holdsworth from Brixham was of a nearly uniform reddish buff colour; and I have seen several others.

The figure on the left hand in the vignette below represents the foot of the *Accentor alpinus;* the right hand figure is taken from the breast-bone of *Accentor modularis*, as an illustration of the generic form of the sternum.





INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE REDBREAST.

Erythaca rubecula.

Sylvia rubecula,	*The Redbreast,*	PENN. Brit. Zool. vol. i. p. 502.
Motacilla „	„	MONTAGU, Ornith. Dict.
„ „	„	BEWICK, Brit. Birds, vol. i. p. 240.
Sylvia „	„	FLEM. Brit. An. p. 68.
Erythaca „	„	SELBY, Brit. Ornith. vol. i. p. 188.
Sylvia „	„	JENYNS, Brit. Vert. p. 103.
Erythaca „	„	GOULD, Birds of Europe, pt. xiv.
Sylvia „	*Bec-fin Rouge-gorge,*	TEMM. Man. d'Ornith. vol. i. p. 215.

ERYTHACA. *Generic Characters.*—Beak rather broad and depressed at the base, becoming narrower towards the point, and slightly compressed; upper mandible deflected and notched. Nostrils basal, lateral, oval, pierced in a membrane, partly hid by feathers and hairs projecting from the base of the beak. Wings rounded ; the three exterior quills graduated ; the first only half as long as the second, which is shorter than the third ; the fourth, fifth, and sixth longer than the third ; the fifth the longest in the wing. Legs—the tarsus longer than the middle toe ; the lateral toes nearly equal to each other in length ; the outer toe united at its base to the middle toe ; the claw of the hind toe longer and stronger than the others.

The Redbreast is so generally distributed over the British Islands, and so universal a favourite, mixed up as it is with our earliest associations, that all are sufficiently interested in the bird to make themselves acquainted with its habits. These may be observed either in the wood, the field, or the garden, since there is scarcely a hedge without its Redbreasted inhabitant: and if Robins appear to be more numerous in winter than in summer, it is partly owing to the state of vegetation at the former season, which leaves them more exposed to observation, and partly because they resort to the habitations of man for food as they find it decline in quantity elsewhere. During summer they feed indiscriminately on earthworms, various insects in their different states, fruit, and berries. In winter every country-house has its attendant pensioner, who requires but little invitation to become an in-door guest. Thomson has most truly described the half-confident, half-doubtful manner of the Robin when he ventures to enter the cottage to pick up the proffered crumbs:

> "then, hopping o'er the floor,
> Eyes all the smiling family askance,
> And pecks, and starts, and wonders where he is."

The sprightly air of this species, the full dark eye and the sidelong turn of the head, give an appearance of sagacity and inquiry to their character, which, aided by their confidence, has gained them friends; and the Robin has accordingly acquired some familiar domestic name in almost every country of Europe.

The song of the Robin is sweet and plaintive, but not very powerful. White of Selborne says, "Redbreasts sing all through the spring, summer, and autumn. The reason that they are called autumn songsters is, because in the two first seasons their voices are drowned and lost in the general chorus; in the latter their song becomes distinguishable. Many songsters of the autumn seem to be the young male Redbreasts of that year."

As the song of the Missel Thrush is said to foretell the rising storm, so may the Redbreast claim to be considered a part of the naturalist's barometer. A writer in an early volume of the Magazine of Natural History says, "On a summer evening, though the weather be unsettled, he sometimes takes his stand on the topmost twig that looks up to the sky, or on the house-top, singing cheerfully and sweetly: when this is observed, it is an unerring promise of succeeding fine weather."

Miller, in his Beauties of the Country, page 31, says, "the Robin does not sing after twilight;" yet he is one of the latest among birds to retire to roost, and one of the first to be seen moving in the morning, requiring apparently but little sleep.

The Redbreast, like the Spotted Flycatcher and some other birds, is remarkable for the peculiarity of the situation in which it sometimes builds its nest. A writer in the Field Naturalist's Magazine states, that a pair of Robins chose for their abode a small cottage, which, though not actually inhabited, was constantly used as a depository for potatoes, harness, &c. and repeatedly visited by its owners. It closely adjoined a large blacksmith's shop; but neither the noise of the adjacent forge, nor the frequent visits of the owners of the cottage, deterred these fearless settlers. They entered through a window-frame, the lattice of which had been removed; and in a child's covered cart, which, with its horse attached to it, was hanging on a peg over the fire-place, and just afforded space for the purpose, they built their first nest early in the spring. The circumstance was observed, and soon became an object of curiosity to the neighbours, many of whom came to look at the nest: these inquisitive visits, however, had not the effect of alarming the birds, who here reared without accident their first brood. When the attention of the parents was no longer needed by their full-fledged offspring, they set about providing for another family, and built their second nest on a shelf on the opposite side of the room close to an old mouse-trap. Here again they received visits of inquiry from bipeds of a larger growth, and reared and dismissed their progeny. This second brood had no sooner left them, than they again betook themselves to the task of building a third nest under the same sheltering roof, and for this purpose chose another shelf, in a different corner of the same room; and there, in their mossy bed, on a bundle of papers, on the 21st of June, were four half-fledged nestlings, which the hen was feeding while a party was watching the proceeding, the cock bird contenting himself with looking on from the outside. There was no doubt that the same pair of birds belonged to each successive nest, as the loss of her tail rendered the hen conspicuous.

Mr. Blackwall of Manchester relates that "a pair of these birds built their nest in a small saw-pit. Soon after the female had begun to sit, the sawing of timber was commenced at this pit; and though the persons employed continued their noisy occupation close to the nest every day during the hatching of the eggs and the rearing of the young, yet the old birds performed their several parental offices to their progeny without interruption, and apparently without alarm."

These birds also exhibit great attachment to each other. One that was "caught and caged by the editor of the Naturalist in winter was for several weeks constantly attended by its mate; which seems to prove that this bird pairs for life. When any one approached the cage, the male bird departed very unwillingly; and if wholly excluded from the room in which the prisoner was confined, it would utter the most unceasing and piteous wailings. After some time, however, the visits became gradually less frequent, and at length ceased altogether."

With many redeeming qualities, the Robin is, however, one of the most pugnacious among birds, and maintains his right to a certain limited domain against all intruders.

The Robin breeds early in spring: its nest is formed of moss, dead leaves, and dried grass, lined with hair, and sometimes a few feathers: the nest is frequently placed on a bank sheltered by brushwood, or a short distance above the ground in a thick bush or lane-hedge, sometimes in a hole of a wall partly covered with ivy. The eggs are from five to seven in number, white, spotted with pale reddish brown; the length nine lines and a half, by seven lines and a half in breadth.

Generally diffused over England, Ireland, and Wales, the Redbreast is also an inhabitant of the most northern counties of Scotland; but, according to Mr. Dunn, it is more rare in the Shetland Islands than it is in Orkney. It also visits Denmark and Sweden in the breeding season; and so well does it bear cold weather, that among the summer visitors to the latter country, M. Nilsson observes that the Robin is one of the first to come, and one of the last to go. Mr. Hewitson also saw it in Norway.

It is a constant resident throughout the year in the temperate and warmer parts of Europe, abundant in Spain and Italy, from the last of which it passes over by Sicily and Malta to North Africa. The Robin was observed by Mr. Strickland at Smyrna in winter; and the Zoological Society have received specimens sent by Keith Abbott, Esq. from Trebizond.

In the adult bird, the beak and irides are black: upper part of the head, neck, back, upper tail-coverts and tail-feathers, a yellowish olive brown; quill-feathers rather darker, the outer edges olive brown; greater wing-coverts tipped with buff: over the base of the beak, round the eye, the chin, throat, and upper part of the breast, reddish orange; encircling this red is a narrow band of bluish grey, which is broadest near the shoulders: lower part of the breast and belly white; sides, flanks, and under tail-coverts, pale brown; under surface of wing and tail-feathers dusky grey; legs, toes, and claws, purple brown.

The whole length of the bird is five inches and three-quarters. The length of the wing from the carpal joint to the end of the longest quill-feather, three inches: the first wing-feather but half the length of the second, which is not quite so long as the sixth; the third, fourth, and fifth nearly equal, and the longest in the wing.

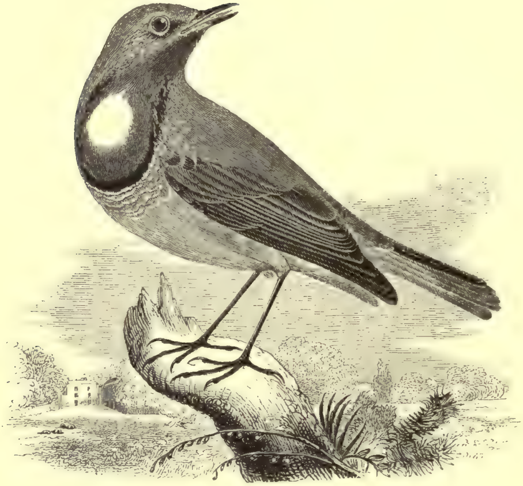
The female is not quite so large as the male, and her colours are less bright.

The young birds before their first moult have the brown feathers of the head, back, and wing-coverts tipped with buff or very pale brown; throat and breast tinged with reddish brown, and margined with dark brown.

The young birds after their first autumn moult resemble adult females; but the red of the breast is tinged with orange, the legs dark brown.

The Redbreast is subject to variation in the colouring of the plumage. White and partly white varieties are not uncommon. I remember, some years ago, having seen one in which the part usually coloured red was a light bluish grey, the back and wings bluish green. In this state, as to colour, the bird had the appearance of a Tit (*Parus*); but the generic characters, and the particular distribution of the colours, decided the species.

INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE BLUE-THROATED WARBLER.

Phœnicura Suecica.

Motacilla	*Suecica*,	*Blue-throated*	*Robin*,	BEWICK Brit. Birds, vol. i. p. 244.
Phœnicura	„	„	*Redstart*,	SELBY, Brit. Ornith. vol. i. p. 195.
Sylvia	„	„	*Warbler*,	JENYNS, Brit. Vert. p. 104.
Phœnicura	„	„	„	GOULD, Birds of Europe, pt. iii.
Ficedula	„	„	*Redstart*,	EYTON, Rarer Brit. Birds, p. 9.
Sylvia	„	*Bec-fin Gorge bleue*,		TEMM. Man. d'Ornith. vol. i. p. 216.

PHŒNICURA. *Generic Characters.*—Beak slender and nearly straight, compressed towards the point, slightly deflected and emarginated. Nostrils basal, lateral, oval, pierced in a membrane, and partly concealed by the feathers of the forehead. Wings of moderate size; the first quill very short; the second equal in length to the sixth; the third, fourth, and fifth nearly equal, but the fourth the longest. Tail more or less red in all the species. Legs with the tarsus lengthened and slender, longer than the middle toe; outer toes nearly equal in length.

Two instances only of the occurrence in England of this prettily-marked Warbler were formerly recorded. The first bird was shot on the boundary hedge of Newcastle Town Moor in May 1826, and was presented by Mr. Thomas Embleton to the Museum of the Literary and Philosophical Society of Newcastle. This circumstance was, I believe, first noticed by G. T. Fox, Esq. of Durham, in his Synopsis of the Newcastle Museum, page 298, and afterwards in the third volume of the Zoological Journal, page 497. By the influence and kindness of that gentleman, this specimen, with some other birds of great rarity and interest, were exhibited a few years ago in London, at one of the evening meetings of the Zoological Club of the Linnean Society. The occurrence of the second specimen is recorded in the second volume of the Naturalist, page 275, and is said to have happened in Dorsetshire.

Soon after the publication of that part of the work which contained this species, I received a letter from Plumptre Methuen, Esq., informing me that a specimen killed near Birmingham was in his possession; and in October 1841, J. H. Gurney, Esq. of Norwich, sent me word that he had just obtained a specimen for his own collection which had but a very few days before been picked up dead near Yarmouth. In September 1844 two birds, one old, the other a young bird of the year, and both then unskinned, were sent for my inspection by Mr. Gardner, of Oxford Street. These birds were shot in the Isle of Sheppy.

This species visits the European Continent from the south in the breeding season. It is observed in Italy on its passage northward in April, and again on its return in September, a straggler being occasionally seen in the winter. It visits during the summer Provence, Spain, France, Holland, Belgium, Germany, and Prussia, going as far north as Russia, Siberia, Finland, West Bothnia, and the most distant part of Sweden. It was seen by Mr. Hewitson in Norway; but, according to M. Nilsson, it is never seen in the lower or southern part of Sweden, nor is it included among the birds of Denmark. It appears to prefer the southern parts of France, and is more abundant in Lorraine and Alsace than elsewhere, in which latter-named country this bird is considered a delicate article of food, and great numbers are caught for the table.

The Blue-throated Warbler is found in Sicily, Malta, and Egypt; Mr. Blyth has also found it in India, near Calcutta.

The food of this species is earthworms, insects, and berries; and its song is said to be pleasing.

I have been favoured by Mr. J. D. Hoy, of Stoke Nayland in Suffolk, with the following notes of his own observations on the habits of this species on the Continent. "This bird makes its appearance early in spring, preceding that of the Nightingale by ten or twelve days. I have always found this species in the breeding season in low swampy grounds, on the woody borders of boggy heaths, and on the banks of streams running through wet springy meadows, where there is abundance of alder and willow underwood. The nest is placed on the ground among plants of the bog myrtle, in places overgrown with coarse grass, on the sides of sloping banks, in the bottom of stubs of scrubby brushwood in wet situations. It is well concealed and difficult to discover. I do not believe they ever build in holes of trees. The nest is composed on the outside of dead grass and a little moss, and lined with finer grass. The eggs from four to six in number, of a uniform greenish blue, eight lines long, and five lines and a half in breadth.

"The notes of this bird have some resemblance to those of the Whinchat, but are more powerful. While singing, if undisturbed, it perches on the tops of the brushwood or low trees; but on the least alarm it conceals itself among the low cover. It does not exhibit the quivering motion of the tail peculiar to the Redstarts; but very frequently jerks up the tail in the manner of the Nightingale and Robin, and while singing, often spreads it. It frequently rises on wing a considerable height above the brushwood, singing, with the tail spread like a fan, and alights often at a distance of fifty or sixty yards from the spot where it rose. On approaching the nest when it contains their young, their notes of alarm or anger resemble those of the Nightingale, but end with a short sharp note instead of the Nightingale's croak: the wings are then lowered, the tail spread and jerked up. The Blue-throat commences his song with the first dawn of day, and it may be heard in the evening when most of the feathered tribe are silent. These birds are caught in autumn by snares baited with berries."

The beak and irides dark brown; over the eye a pale streak: the top of the head, all the upper surface of the body and wings, uniform clove-brown; outer edges of the wing-feathers lighter brown: the two middle tail-feathers clove-brown throughout their whole length; all the other tail-feathers have the basal half bright chestnut, the distal half nearly black: chin, throat, and fore part of the neck and upper part of the breast, ultra-marine blue, with a spot in the centre, which in some specimens is pure white, but in very old males is red; below the blue colour is a black bar, then a line of white, and still lower down a broad band of bright chestnut: belly dirty white; flanks and under tail-coverts light reddish brown; legs, toes, and claws, brown.

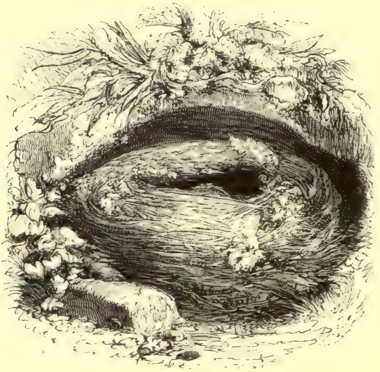
The whole length of the bird six inches. From the carpus to the end of the longest quill-feather, two inches and seven-eighths: the first feather very short; the second equal to the sixth; the third, fourth, and fifth nearly equal in length, but the fourth the longest in the wing.

Females resemble the males in the uniform colour of the upper parts; the tail-feathers not so bright: the chin and upper part of the throat white, bounded below by a crescent-shaped patch of blue mixed with some black, the horns of which are directed upwards, encircling the white; below the blue colour the breast is pale reddish brown: belly and flanks dull white. Some old females have the blue and white almost equal in colour to that of the males.

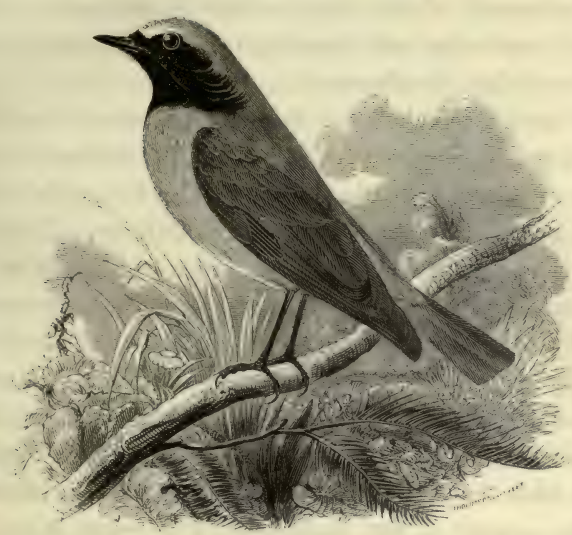
The young in their first feathers resemble the young of the Redbreast.

Young males after their first moult resemble adult females; the blue colour increasing by degrees on the chin, sides of the neck, and throat, till the white is reduced to a central patch.

The vignette below represents the nest and eggs of this species.



INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE REDSTART.

Phœnicura ruticilla.

Sylvia	*phœnicurus,*	*The Redstart,*	Penn. Brit. Zool. vol. i. p. 500.
Motacilla	,,	,,	Montagu, Ornith. Dict.
,,	,,	,,	Bewick, British Birds, vol. i. p. 246.
,,	,,	,,	Flem. Brit. An. p. 68.
Phœnicura ruticula,		,,	Selby, Brit. Ornith. vol. i. p. 191.
Sylvia phœnicurus,		,,	Jenyns, Brit. Vert. p. 104.
Phœnicura ruticilla,		,,	Gould, Birds of Europe, pt. vi.
Sylvia phœnicurus,		*Bec-fin de murailles,*	Temm. Man. d'Ornith. vol. i. p. 220.

The Redstart is a summer visitor that comes to this country from the south, and proceeds both to the westward and northward. It is not very numerous, and in some localities is rather rare. It makes its appearance in the southern counties of England generally about the second week in April, arrives in the neighbourhood of Carlisle by the third week, but does not reach the southern part of

Sweden till the end of the month: and the character of the season exercises great influence in determining the time of the appearance of this bird, as well as some others; the state of vegetation and temperature being generally better indicators than the almanack.

In some particulars the Redstart resembles the Bluethroat and the Redbreast. It inhabits the skirts of forests, lanes, meadows, orchards and gardens, and is partial to old walls and ruins, particularly if overrun with ivy. The male bird is remarkable for the distribution and purity of the colours of his plumage, and makes himself rather conspicuous by perching on the uppermost branch of low trees, moving his tail repeatedly, and singing his soft and sweet song, — occasionally taking a short flight to some other prominent station, and singing as he flies. Like most of those birds that are gifted with powers of song, as observed in the account of the Blackbird, the Redstart is also an imitator of the notes of other birds; and some have been taught, like the Bullfinch, to repeat a tune. Mr. Sweet possessed a Redstart that whistled the Copenhagen Waltz; and other males of this species have been known to imitate very closely the notes of the Sparrow and Chaffinch, and the songs of the Garden Warbler and Lesser Whitethroat.

The food of the Redstart is worms, beetles and their grubs, flies, spiders, ants and their eggs, fruit and berries. Most of these they seek for on the ground, like the Accentors and Redbreasts; but they are also frequently seen to capture insects on the wing with as much ease and certainty as the true Flycatchers.

The nest, which is rather loosely constructed, is formed of moss externally, and lined with hair and feathers: it is occasionally placed in a hollow tree, or in a hole in a wall, or behind a branch of a tree that is trained against a wall, and sometimes in a hole on the ground even where there has happened to be abundance of trees. A writer in the Zoologist has furnished the following notice on a singular locality for a Redstart's nest: "In the spring of 1841, I noticed that when I went to a particular part of my garden, a male Redstart always appeared much distressed, which convinced me that its nest was close at hand, but I could not find it. One day, having occasion for a common flower-pot, not of a very large size, I took one which had been left inverted on a narrow path between two sea-kale beds. On lifting it up, I discovered a nest with five eggs, placed on the ground. I carefully replaced the pot over the nest, inclining it a little towards the south, so that when the sun was shining I could just discern the eggs through the hole at the bottom (now, from its inverted position, the top) of the pot. On passing it soon after, I found the hen bird was on the nest; and she succeeded in hatching and bringing up her brood; paying no regard to my looking down upon her as I passed by, if I did not stop."

The eggs are from four to six in number, sometimes seven; and in a few instances as many as eight have been found. The egg is of a uniform greenish blue colour, eight lines and a half long, and six lines and a half in breadth. Two broods are sometimes produced in the season. Mr. Jenyns says, the young of the first brood are fledged by the second week in June.

The Redstart as a species is naturally a shy and timid bird; but during the time the female is sitting, the male exposes himself constantly, and may almost always be seen in some conspicuous situation, not far from the nest. At this season he sings early and late; he has been heard singing after ten o'clock at night, and at three in the following morning.

The Redstart was considered by Pennant and some other authors not to extend its range to the westward beyond Exeter; but though rather rare in the eastern part of Cornwall, it is not an uncommon bird in the extreme western part, as I learnt from the communications of Mr. Couch and Mr. Rodd. This bird also visits Wales now, and has been obtained once in Ireland, near Belfast, by Dr. J. D. Marshall, as I learnt from W. Thompson, Esq.

In a northern direction from London, it is found in Suffolk, Norfolk, Yorkshire, Northumberland, and various parts of Scotland, even to Sutherlandshire. Still further north, it visits Denmark, Norway, Sweden, Siberia, Russia, and from thence southward it is distributed over the more temperate parts of Europe. It is abundant in Holland, France, Provence, Spain, and Italy. The Zoological Society have received skins from Tangiers, where it is said to be common. It is found during summer in Sicily and Malta, going from thence to Egypt. Specimens have been received from Trebizond, and also from Erzeroom, about one hundred miles farther to the south-east of Trebizond. It has been found in Nepal, and M. Temminck includes it among the birds of Japan.

In the adult male Redstart during summer the beak is black, with a narrow band of black feathers above its base; the irides brown; the forehead white; the top of the head, the scapulars, back, and wing coverts, lead-grey; wing-feathers brown, with the outer edges rather lighter; upper tail-coverts and tail-feathers bright rufous chestnut, the centres only of the two middle tail-feathers being marked with a longitudinal strip of dark brown; the chin, throat, sides of the neck and face, including the eyes, jet black; breast, belly, under wing and tail-coverts, and under surface of tail-feathers, pale chestnut; under surface of the quill-feathers of the wings grey; legs, toes, and claws, brown.

The whole length of the bird five inches and one quarter. From the carpal joint of the wing to the end of the longest wing-feather, three inches: the first wing-feather very short; the second equal in length to the sixth; the third, fourth, and fifth nearly equal, but the fourth the longest.

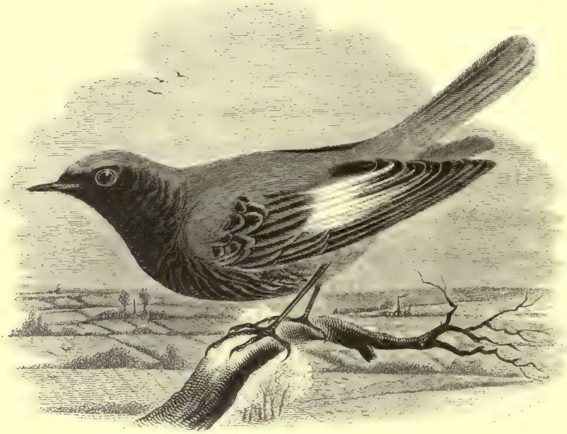
The female has neither the white nor the black on the head; the upper surface of the body greyish brown; the chestnut colour of the tail-feathers, and their upper coverts, rather less bright than in the males; under surface of the body and tail-feathers pale reddish brown. Very old females obtain plumage somewhat similar to that of the males; but the colours are neither so pure nor so bright.

The young in their nestling plumage very closely resemble the young of the Robin, except on the rump and tail; all the upper parts are of a dusky brown, with a pale spot upon each feather: wing-coverts broadly edged with pale brown; tail and tail-coverts rufous; breast mottled with yellowish and dusky brown.

Young males of the year after their autumn moult, and adult males in winter, have the black and chestnut parts of the throat and breast varied with white lines; no white on the forehead of the young males; and the upper parts of the body are pale reddish brown, tinged with grey.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE BLACK REDSTART.

Phœnicura tithys.

Phœnicura tithys,	*Tithys Redstart,*	Selby, Brit. Ornith. vol. i. p. 193.
Sylvia ,,	*Black Redtail,*	Jenyns, Brit. Vert. p. 105.
Ficedula ,,	,, *Redstart,*	Eyton, Rarer Brit. Birds, p. 7.
Phœnicura ,,	,, ,,	Gould, Birds of Europe, pt. viii.
Sylvia ,,	*Bec-fin Rouge queue,*	Temm. Man. d'Ornith. vol. i. p. 218.

The Black Redstart, which is at once distinguished from the well-known and common Redstart, last described, by being sooty black on the breast and belly where the other is reddish brown, was first made known as an occasional visitor to this country by Mr. Gould, who recorded the occurrence and capture of a specimen near London in October 1829: and another example has since been seen in the Regent's Park. In 1830, two other specimens were obtained; one at Bristol, the other at Brighton. In

January 1833, a fourth example occurred at Teignmouth in Devonshire; and in December 1835, a specimen was shot near Bristol while flying about with some Stonechats among furze. It has also been obtained, once at least, in Ireland, on the concurrent testimony of Robert Ball, Esq., of Dublin, and William Thompson, Esq., of Belfast.

Since the publication of the first edition of this work, Black Redstarts have been obtained in Cornwall, at Teignmouth in Devon, in the Isle of Wight, and in Kent.

This bird, according to M. Nilsson, is very rare in Sweden, and in the northern parts of the European Continent generally, and is seldom seen in Holland; it is, however, rather a common summer visitor to Germany, France, and Switzerland; more plentiful in Provence, Spain, and Italy, in which countries it is resident from April to October, occasionally remaining in the South of Italy during the winter. It is found at Corfu, Sicily, and Malta. M. Temminck says it inhabits the Morea; and Mr. Strickland observed that it was common on the bare rocky hills near Smyrna, where it also remains during winter. Drummond Hay, Esq., included it in his list of the birds of Tangiers. The specimen figured by Edwards in his twenty-ninth plate was received from Gibraltar; and the Prince of Musignano, when at sea in the spring of 1828, being then five hundred miles from Portugal and four hundred from Africa, obtained a specimen of this bird, which was caught with some other small birds on the rigging of the vessel, the wind at the time blowing strong from the eastward.

The manners and habits of this bird are somewhat similar to those of the Redstart; but it prefers stony places, and is rarely seen on the plains. Its food consists of worms, insects, in their various stages, the smaller fruits, and berries. It makes a nest in the clefts of rocks; and when it frequents towns or villages, it chooses holes in walls, roofs of houses, and sometimes, according to M. Vieillot, the elevated parts of churches. The nest is formed externally of grass, and lined with hair: the eggs are five or six in number, ten lines in length by seven lines in breadth, white, smooth, and shining. The female frequently has two broods in the season. The song of the male, according to Bechstein, "contains a few high, clear notes, which may be heard from an early hour in the morning till night. The bird is always gay and active, shaking its tail at every hop, and continually uttering its peculiar call-note."

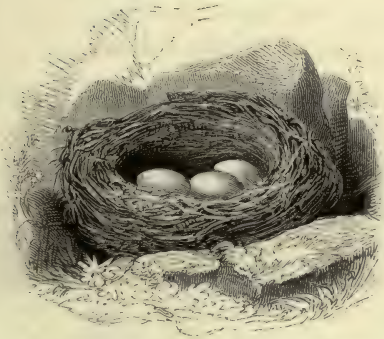
In the adult male, the beak is black, the irides blackish brown; the top of the head, neck, and back, dark bluish grey: wing-coverts and quill-feathers greyish black; the coverts edged with lighter grey; the secondaries and tertials on the outer edges almost white: rump and tail-coverts chestnut; tail-feathers bright chestnut, except the two middle feathers, which are very dark brown, almost black. The cheeks, chin, throat, breast, and sides, dark sooty grey, becoming slate-grey on the belly, and still lighter on the vent and under tail-coverts, which are tinged with red; under wing-coverts dull greyish white; under surface of the primaries lead-grey; under surface of tail-feathers chestnut; legs, toes, and claws, black.

The whole length of the bird is five inches and three-quarters. From the carpal joint to the end of the longest quill-feather three inches and three-eighths: the first quill-feather very short; the second and the seventh nearly equal in length; the third rather longer than the sixth; the fourth and fifth equal, and the longest in the wing.

The female of this species is not very unlike the female of the Common Redstart, but is generally somewhat darker. The upper parts are of a dull brownish grey, the tertials being margined with buffy white; tail-feathers brownish red; under surface of the body light grey.

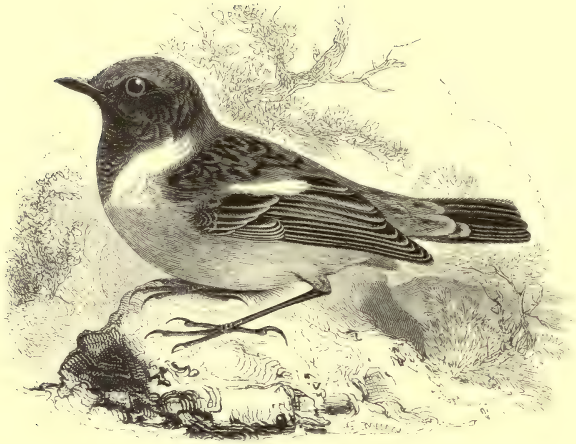
The young birds of the year in their first plumage resemble adult females: the young males afterwards assume by degrees a light grey colour; but it is probable they are several years old before they attain the very dark sooty grey colour; so many shades of grey being observable among them.

The vignette below represents the nest of the Black Redstart, reduced in size, from the coloured figure forming the subject of the fifteenth plate in the work of Dr. Schinz on the Eggs and Nests of the Birds of Switzerland and Germany, published at Zurich in 1819.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE STONECHAT.

Saxicola rubicola.

Sylvia	*rubicola,*	*The Stonechat,*	Penn. Brit. Zool. vol. i. p. 526.
Motacilla	"	"	Mont. Ornith. Dict.
"	"	"	Bewick, Brit. Birds, vol. i. p. 278.
Saxicola	"	"	Flem. Brit. An. p. 68.
"	"	"	Selby, Brit. Ornith. vol. i. p. 185.
"	"	"	Jenyns, Brit. Vert. p. 121.
"	"	"	Gould, Birds of Europe, pt. vi.
"	"	*Traquet rubicole,*	Temm. Man. d'Ornith. vol. i. p. 246.

Saxicola. *Generic Characters.* — Beak straight, slender, the base rather broader than high, surrounded with a few stiff hairs ; the superior ridge of the upper mandible prominent, the sides towards the point compressed ; the point itself curved and indented. Nostrils basal, lateral, oval, half closed by a membrane. Wings—the first quill-feather about half as long as the second ; the second shorter than the third or the fourth, which are the longest in the wing. Feet—the tarsus rather long, three toes in front, one behind ; the outer toe connected by a membrane to the middle toe ; claw of the hind toe short, strong, and curved.

The Stonechat, a migratory species over the greater part of the European Continent, where it is not observed to remain during the winter, is a constant resident in this country,—or at least it may be said, that only a portion of those produced during the breeding season leave us in autumn, and return again about the end of March in the spring following. Many remain, and may be seen through the winter months on most of our dry commons and heaths which are partially covered with patches of furze or low brushwood. Should the weather prove very severe, they leave these exposed districts, and frequent for a time more sheltered situations. In the spring and early part of summer this lively little bird may be seen flitting from bush to bush, restless and noisy,—from which latter habit the common names of Stonechatter and Stoneclink originate,—almost always perching on the most elevated part of a stone or bush, and seldom remaining long in one spot. From such prominent positions they may be seen darting off with rapid motion to capture a passing insect, and Flycatcher like, returning to their former station. Their song, which is also occasionally uttered while on the wing, is short, but pleasing; and they may be frequently heard to imitate the notes of other small birds. They are often to be seen on the ground in search of worms, which, with various insects, are their most common objects of request as articles of food.

The Stonechat begins to build early in April: the nest is rather large for the size of the bird, and is usually placed on or near the ground at the base of some low bush; the outside of a specimen now before me is constructed of moss and strong grass, lined with fine bents, hairs, and a few small feathers. The female lays five or six eggs, about the middle or during the third week of

April; these are of a pale greyish blue, the larger end minutely speckled with dull reddish brown: the length of the egg is about eight lines and a half, and seven lines in breadth. The young are usually hatched by the middle of May; and the parent birds are then clamorous and bold, practising various tricks to entice intruders from their nest.

The Stonechat is common in the counties along our southern coast to the Irish Channel; it is also a constant resident in the south, the west, and the north of Ireland. It is observed constantly in Suffolk, Norfolk, Yorkshire, and Northumberland; Mr. Selby observed it in Sutherlandshire; and Mr. Macgillivray includes it in his Catalogue of the Birds of the Hebrides.

M. Temminck mentions that specimens of the Stonechat were sent by Pallas from some part of Russia, but the particular locality is not named: these specimens, it is stated, did not differ from others received from South Africa. The Stonechat is common during summer in Germany, France, Provence, and Italy; it is found at Corfu, Sicily, Crete, and was observed by Mr. Strickland at Smyrna. Mr. Swainson includes the Stonechat among the birds of Senegal; it is found at Tangiers, and Le Vaillant and Dr. Smith obtained specimens at the Cape. In a direction east of Europe, the geographical range of this little bird is extensive. In India, the Stonechat has been found by Colonel Sykes, Major Franklin, and Mr. Blyth. M. Temminck includes the Stonechat in his Catalogue of the Birds of Japan.

The adult male, in May, has the beak black; the irides dark brown; the head, neck, and back, nearly black; wing-coverts of the tertials white, but partly hid by the other coverts, which are blackish brown, edged with lighter brown; quill-feathers the same colour: upper tail-coverts white; tail-feathers nearly black. Chin and throat black; sides of the neck to the wing white; breast rich chestnut, becoming lighter, almost yellowish white, on the belly, vent, and under tail-coverts; under surface of the quill-feathers lead-grey, edged with dull white; legs, toes, and claws black.

The whole length of the bird five inches and one-quarter. From the carpal joint of the wing to the end of the longest quill-feathers two inches and three-quarters: the first quill-feather not half so long as the second; the second equal to the seventh; the third, fourth, fifth, and sixth, nearly equal; the fourth rather the longest of all.

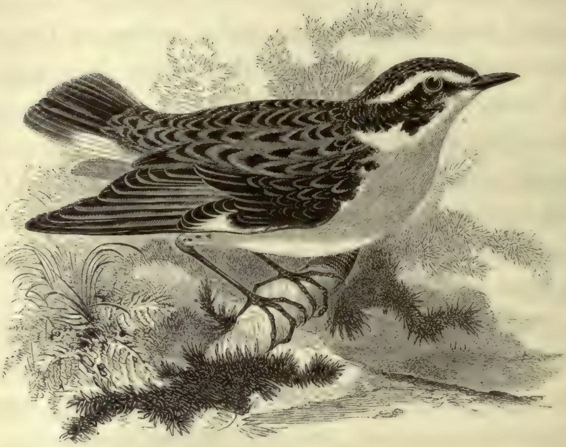
Adult males after their autumn moult have the feathers of the neck and back broadly edged with rufous brown; quill-feathers margined, and tail-feathers tipped with the same rufous colour; the dark feathers on the throat edged with rufous brown; the breast and belly lighter in colour than in summer.

The adult female has the feathers of the upper parts blackish brown, bordered with buff; the quill and tail-feathers brown, edged with buff; throat blackish, varied with small spots of white and red; the white space on the neck and wings of smaller extent than in the male; breast dull red.

Young birds in their nestling plumage have the feathers of the upper parts of a greyish brown, with a spot of white at the end.

Young males after their first moult resemble adult females; after their second moult they attain by degrees the plumage of adult males.

INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE WHINCHAT.

Saxicola rubetra.

Sylvia	*rubetra,*	*The Whinchat,*	Penn. Brit. Zool. vol. i. p. 525.
Motacilla	,,	,,	Mont. Ornith. Dict.
,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 277.
Saxicola	,,	,,	Flem. Brit. An. p. 67.
,,	,,	,,	Selby, Brit. Ornith. vol. i. p. 183.
,,	,,	,,	Jenyns, Brit. Vert. p. 120.
,,	,,	,,	Gould, Birds of Europe, pt. i.
,,	,,	*Traquet tarier,*	Temm. Man. d'Ornith. vol. i. p. 244.

The Whinchat, or Furzechat, is in its habits, and also in the localities it frequents, very similar to the Stonechat, last described. Its obvious partiality to furze, which is also in many parts of England called whin, has induced its most common names; and, like the Stonechat, it darts along with an undulating flight from bush to bush, always perching on one of the uppermost twigs. There is one difference between the Whinchat and the Stonechat which must be mentioned. A considerable number of Stonechats pass the winter in Britain; but the Whinchats, almost to a bird, depart in autumn to go farther south. The similarity in various points between these two birds has induced a partial belief that the Whinchats, like the Stonechats, remained here during the winter. Pennant thought they did not migrate, only shifted their quarters; but I am not aware of more than two authentic instances of the Whinchat being seen here in winter, one in Cambridgeshire, and one in Devonshire.

The Whinchat makes its appearance in the southern and south-eastern parts of this country about the middle of April, and arrives in the northern counties by the end of that month: it does not, however, begin to build so soon as the Stonechat, but is usually about a fortnight later. Its song is agreeable, generally given from an elevated position on a furze-bush, or while hovering in the air over it. Like most song birds, it is prone to imitate the notes of others; and the Whinchat appears to have been an especial favourite with Mr. Sweet, who was well known for his partiality to, and successful treatment of, the Warblers in confinement, and has published his method of treatment. One of these birds brought up from the nest by Mr. Sweet used to sing the whole day through, and very often at night: it sang the notes of the Whitethroat, Redstart, Willow Warbler, Missel Thrush, and Nightingale. The food of the Whinchat is worms, insects, small testaceous mollusca, slugs, and berries.

The nest, generally placed on the ground, is similar to that of the Stonechat, formed with a little moss and bents of grass, lined with finer bents: the eggs, five or six, of a uniform bluish green, with some minute specks of dull reddish brown; the length of the egg nine lines, and six lines and a half in breadth. Mr. Jenyns says, the young are hatched towards the end of May, and two broods are produced in the season. In the month of August, when fat, though smaller in size than the Wheatear, they are not otherwise inferior to it as an article of food for the table.

Whinchats may rather be said to be general than numerous, and are usually seen in pairs only, till their young leave the nest. They are observed in all the counties around London; and in a southern and western direction, in Hampshire and Dorsetshire; but more rare in Devonshire, and still more so in Cornwall. Montagu says they are plentiful in Somersetshire, Wiltshire, and Gloucestershire; are observed in Wales; and, according to Mr. Templeton and Mr. Thompson, are regular summer visitors to Ireland. North of the counties surrounding London, the Whinchat is seen in Suffolk, Norfolk, Yorkshire, Durham, and Northumberland; and, still further north, was seen by Mr. Selby in Sutherland, and by Mr. Macgillivray in the Hebrides; but is not included among the Birds of Orkney or Shetland.

The Whinchat visits Denmark, and was observed by Mr. Hewitson to be rather numerous in those parts of Norway that were clear of wood; and, according to M. Nilsson, it arrives in Sweden by the end of April. It is found also, according to Pennant, in the temperate parts of Russia as far as the Uralian chain, but does not reach Siberia. In summer it is found over the whole of the South of Europe to the shores of the Mediterranean. It is seen at Genoa and in Italy on its passage to the south and east in September; it is seen also at Corfu, Sicily, Malta, Egypt, and

Crete; Mr. Strickland observed that it was a common bird at Smyrna in winter, and Mr. Blyth has obtained it in India.

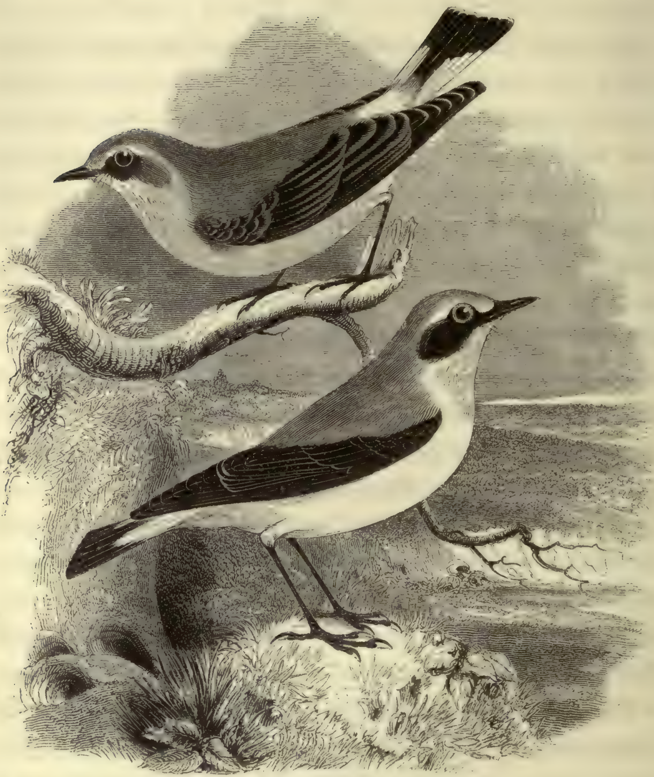
The male has the beak black; from the angle of the gape of the beak to the eye a brown streak; irides brown; the ear-coverts and a patch under the eye dark brown; over the lore, the eye, and the ear-coverts, an elongated streak of white: top of the head, neck, back, and smaller wing-coverts, a mixture of pale brown and very dark brown, each feather being dark in the centre, and light at the circumference: greater wing-coverts black; the spurious wing white: quill-feathers dark brown, the primaries reaching nearly to the end of the tail; the secondaries and tertials edged with light brown; tail-feathers white at the base, dark brown over the distal half, and edged with pale brown. The chin and a line from thence reaching beyond the lower edge of the end of the ear-coverts, white; throat and breast delicate fawn-colour, passing into pale buff on the belly and under tail-coverts; under surface of the distal half of the tail-feathers greyish black. Legs, toes, and claws, black.

The whole length of the bird rather short of five inches. From the carpal joint to the end of the longest primary, three inches: the first feather very short; the second equal to the fifth; the third the longest.

In the female, the white on the spurious wing is less conspicuous; and the colouring of the under surface of the body has less of red and more of yellow in the tint.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE WHEATEAR.

Saxicola œnanthe.

Sylvia	*œnanthe,*	*The Wheatear,*	PENN. Brit. Zool. vol. i. p. 521.
Motacilla	,,	,,	MONTAGU, Ornith. Dict.
,,	,,	,,	BEWICK, Brit. Birds, vol. i. p. 274.
Saxicola	,,	*The Fallowchat,*	FLEM. Brit. An. p. 67.
,,	,,	*The Wheatear,*	SELBY, Brit. Ornith. vol. i. p. 181.
,,	,,	,,	JENYNS, Brit. Vert. p. 119.
,,	,,	,,	GOULD, Birds of Europe, pt. ii.
,,	,,	*Traquet moteux,*	TEMM. Man. d'Ornith. vol. i. p. 237.

The Wheatear, or Fallowchat, as it is sometimes called, is another summer visitor allied to the Stonechat and Whinchat, which generally makes its appearance from the southward about the middle of March, and is one of the earliest among those birds which seek to pass the season of reproduction far to the north of their winter-quarters.

In reference to their appearance in spring, Mr. Couch, who resides on the coast of Cornwall, remarks that "the Wheatear reaches our shores so early in the morning as to prove that it must have taken flight from the French coast long before daybreak. Few come after nine o'clock in the morning, and none after twelve. They sometimes perch on our fishing-boats, at two or three leagues from land, in an almost exhausted state. They do not cross the Channel every day; and as it usually happens that our own residents are not the first to arrive, it is common for them to abound in a morning; but in the afternoon, and for a day or two after, for not one to be seen. My own observations do not confirm the remark, that one sex materially precedes the other: they rather appear to arrive indiscriminately. Through the summer, the Wheatear is a common bird along our coasts, on the slopes fronting the sea, somewhat above the bare uncovered rocks. On the least alarm, they flit over the precipice, and take refuge in some place of shelter."

These birds, arriving in numbers probably along the whole line of our southern coast, soon disperse themselves over the downs, warrens, and fallow lands, some of them seeking for a time very high northern latitudes, to be hereafter enumerated.

The Wheatear feeds principally on worms, and various insects, some of which are taken on the wing, the bird returning to its former elevated position on a lump of earth, or the top of a stone, from whence it keeps a sharp look-out, both as a measure of precaution as well as for food; but is not so prone to alight on a bush as either of the species of *Saxicola* already described.

The Wheatears begin to make their nest in the southern parts of our island by the middle of April; and on the sea-coast, where some remain, Mr. Couch says, "our prying fisher-boys inform me that it is concealed in the bottom of a deep recess, beneath some huge stone or rock, far beyond the reach of their arm. Consequently, when discovered,—a circumstance of some difficulty,—they are able to obtain it only by means of a hook fastened to the end of a rod." The Wheatear frequently makes its nest in old walls, or in pits from which stone, gravel, sand, or chalk have been dug out. In the Journal of a Naturalist, Mr. Knapp says, "one had made her nest deep in the crevice of a stone quarry, so carefully hidden by projecting fragments as not to be observed from without until part of the rock was removed; her fabric was large and rudely constructed with dried bents, scraps of shreds, feathers, and rubbish, collected about the huts on the down, and contained four pale blue eggs. Another hen-bird had descended through the interstices of some rather large loose stones, as a mouse would have done, and then proceeded laterally to a hollow space in a bank, against which the stones were laid; and so deep had she penetrated, that many of the stones had to be removed before we could discover her treasure: as no appearances led to any suspicion of a nest, it would never have been detected but for our watchfulness."

The same degree of caution, however, is not always observable. In Suffolk and Norfolk, the Wheatear, according to Mr. Salmon, "is very abundant on the warrens, and usually selects a deserted rabbit-burrow, in which it places its nest at some little distance from the entrance: it is composed of dried roots, intermixed with feathers, rabbits' down, and other light substances; and it generally contains six pale blue eggs. The nest is easily detected by a little observation, for in such situations the old birds amass a considerable number of small pieces of the withered stalks of the brake, *Pteris aquilina*, on the outside at the entrance of the burrow: by noticing this circumstance its nest is sure to be discovered." I have more than once found the nest in a fallow field under a large clot, to which my attention was drawn by a portion of the materials of which the nest was composed appearing outside the hole through which the bird passed to the hollow space within. The eggs are of a uniform delicate pale blue, measuring ten lines and a half in length, and seven lines and a half in breadth.

The male sings prettily, but not loud, sometimes even when hovering on the wing, either near his nest or his partner. Mr. Sweet, in his British Warblers, says, "that in confinement the Wheatear is continually in song, and sings by night as well as by day: their winter song is the best and the most varied."

Whether owing to the art with which the nest of this bird is mostly concealed, or placed beyond the reach of danger; whether from the great number of the parent birds that breed here; or that in autumn the numerous families migrate toward the same point on our southern coast from which to take their departure; but the number of these birds seen and taken every autumn in the county of Sussex alone is very extraordinary.

The extensive downs between Eastbourne and Beachy-head are visited by the Wheatear from the end of July to the middle of September by hundreds in daily succession. Other portions of the downs along the southern coast have their share also of these periodical emigrants; and as they are then fat and of good flavour, it is customary to dress them by dozens at the inns of the numerous watering-places on the Sussex coast.

The birds are supplied in profusion by the shepherds, who form numerous traps for them in the turf of the downs over which their flocks and cattle graze. The Wheatear trap is formed by cutting an oblong piece of turf from the surface, about eight inches by eleven, and six inches thick, which is to be taken up in a solid mass, and laid in the contrary way both as to surface and direction over the hole, thus forming a hollow chamber beneath it. Besides this chamber, two other openings are also cut in the turf, about six inches wide and of greater length, which lead into the chamber at opposite ends, that the bird may run in under the turf through either of them. A small straight stick, sharpened at both ends, not very unlike a common match, but stouter, is fixed in an upright position a little on one side of the middle of the square chamber; the stick supports two open running loops of twisted horse-hair placed vertically across the line of passage from either entrance to the opposite outlet, and the bird attempting to run through is almost certain to get his head into one of these loops and be caught by the neck: upon the least alarm, even the shadow of a passing cloud, the birds run beneath the clod and are taken.

However inefficient this trap may appear to be from my description, the success of the shepherds is very extraordinary. It is recorded in the Linnean Transactions that as many as eighty-four dozen have been caught by a shepherd in one day; and Pennant states that the numbers snared about Eastbourne amounted annually to about 1840 dozen. It is not unusual, however, for a shepherd and his lad to look after from five hundred to seven hundred of these traps. They are opened every year about St. James's Day, the 25th of July, and are all in operation by the 1st of August. The birds arrive by hundreds in daily succession, but not in flocks, for the next six or seven weeks, probably depending on the distance northward at which they have been reared. The season for catching is concluded about the end of the third week in September, after which very few birds are observed to pass. Stragglers are occasionally seen later in the year. Mr. Sweet "observed a pair on the 17th of November 1822, near the gravel-pit in Hyde Park, which were quite lively, and flying about after insects as brisk as if it had been the middle of summer."

The diffusion of the Wheatear during summer over England, Wales, Ireland, and Scotland is general; it visits also the Hebrides, and the islands of Orkney and Shetland. It arrives in Denmark and Sweden about the middle of April; Mr. Hewitson saw numbers in Norway; and Linneus observed it in Lapland. The extreme northern range of this apparently delicate bird is very extensive. It visits the Faroe Islands and Iceland. Captain Sabine, in his Memoir on the Birds of Greenland, says, "This species was not seen on the shores of Greenland, on which we landed; but on our return homewards in October 1818, off Cape Farewell, a few were seen at a distance from the land, doubtless on their passage southward. In our outward voyage, in May, we also met with them in latitude 60° N. and longitude 13° W., then most probably migrating northward." In high latitudes, this little bird does not breed till June; and it has been seen on the shores of

Greenland by Fabricius and others. Captain James Ross, in the Natural History appended to the narrative of the last Voyage to the Arctic Regions, says of the Wheatear, "One of these little birds was observed flying round the ship in Felix Harbour, 70° N. 91° 53′ W., on the 2nd of May 1830, and was found dead alongside the next morning: having arrived before the ground was sufficiently uncovered to enable it to procure its food, it had perished from want. It is the only instance of this bird having been met with in Arctic America, in the course of our several expeditions to those regions."

The Wheatear is abundant on the European Continent, and very numerous on the northern shores of the Mediterranean in spring, and again in autumn. M. Temminck says it is found in Dalmatia and the Morea; it is found also in Sicily and Crete; Mr. Strickland observed it at Smyrna in April; and the Zoological Society have received specimens from Keith Abbott, Esq., obtained at Trebizond and Erzeroom, the most eastern localities, as far as I am aware, that have yet been quoted for this species.

The adult male in the breeding season has the beak, the space between the beak and the eye, a small line under the eye, and the ear-coverts, black; the irides dark brown; the space above the base of the beak, a narrow line over the eye, and a small space above the ear-coverts, white; the head, back, and scapulars, of a fine light grey; wing-coverts and quill-feathers almost black: upper tail-coverts white; the two middle tail-feathers, with the proximal third, white,—the distal two-thirds black; all the other tail-feathers have the proximal two-thirds white, the distal one-third black: chin and throat buff colour; belly, flanks, vent, and under tail-coverts, pale buffy white; legs, toes, and claws, black.

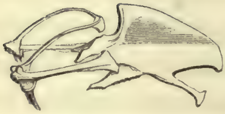
The whole length of the adult bird is six inches and a half. From the carpal joint to the end of the longest quill-feather, three inches and seven-eighths: the first feather very short; the second as long as the fifth; the third and fourth equal in length, and the longest in the wing.

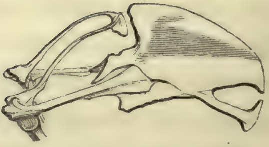
In the adult female, during the breeding season, the ear-coverts are dark brown; the grey of the back and the buff of the under surface of the body are each clouded with brown.

Immediately after the breeding season the annual moulting takes place, and the plumage of old and young is then very similar: the beak and the colours of the cheeks are much the same as before, but the top of the head, back, and scapulars are reddish brown, slightly tinged with grey; each feather being grey at the base, but brown at the tip, the brown thus hiding the grey: the wing-coverts, secondaries, and tertials, broadly edged with reddish brown; the tail-feathers tipped with buff; the reddish buff-colour of the chin and throat, and the paler buff colour of the belly, vent, and under tail-coverts, are much more intense in colour and richness. This change, as before remarked, is produced by the regular autumnal moult, and the brown colour remains all the winter; but in the following spring the change from the brown to the grey appearance is effected by the wearing off of the brown tips and margins of all the feathers that were previously so coloured;—an illustration of one of the modes by which changes of appearance are effected, as referred to at the bottom of page 166. These brown edges disappear from the quill-feathers of the wings before the brown colour is lost on the feathers of the head, neck, back, and scapulars. On these last-named parts the change from brown to grey is gradual, and many shades of difference may be observed in different specimens, some changing more rapidly than others; but the change from grey to brown produced by the autumn moult is rapid and general, affecting all alike.

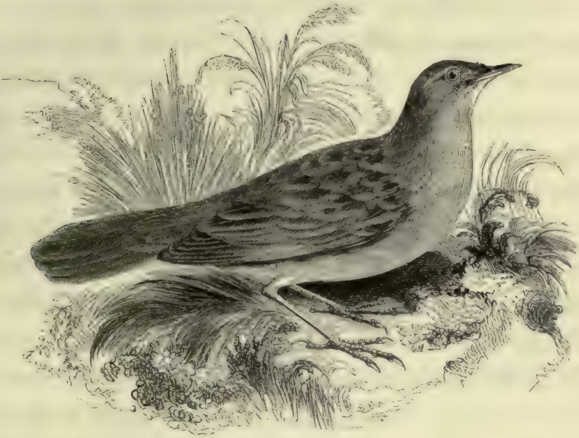
Females and young birds in autumn do not differ much from adult males at the same season, except that the markings about the head are less clearly defined, and the colours are rather less pure. The birds are in this state of plumage when caught in such numbers on the south downs.

The vignette represents the breastbones of the Robin and the Wheatear.





INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE GRASSHOPPER WARBLER.

Salicaria locustella.

Sylvia	*locustella,*	*Grasshopper*	*Warbler,*	PENN. Brit. Zool. vol. i. p. 518.
"	"	"	"	MONTAGU, Ornith. Dict.
"	"	"	"	BEWICK, Brit. Birds, vol i. p. 236.
Curruca	"	"	"	FLEM. Brit. An. p. 69.
Salicaria	"	"	"	SELBY, Brit. Ornith. vol. i. p. 199.
Sylvia	"	"	"	JENYNS, Brit. Vert. p. 106.
Locustella	*avicula,*	*Brake*	*Locustelle,*	GOULD, Birds of Europe, pt. xix.
Sylvia	*locustella,*	*Bec-fin*	*Locustelle,*	TEMM. Man. d'Ornith. vol. i. p. 184.

SALICARIA. *Generic Characters.*—Bill straight, subulate, expanded at the base, with the ridge of the upper mandible elevated, compressed towards the tip, which is slightly deflected and emarginated ; the edges straight, those of the under mandible being gently inflected. Nostrils, basal, lateral, oval, and exposed. Forehead narrow and depressed. Wings rather short ; the first quill nearly abortive, the second a little shorter than the third, which is the longest of all. Tail rounded. Legs having the tarsi longer than the middle toe ; feet rather large and stout ; the hind toe large and strong : claws moderately curved, long, and very sharp ; that of the hind toe longer and larger than any of the others.

I HAVE followed several systematic authors in considering the four species next to be described as entitled to generic distinction. The rounded form of the tail, the outer feathers being much shorter than those in the middle, and the partiality of these birds to moist situations, particularly conspicuous in the Sedge and the Reed Warblers, appear to separate them from the Sylvan Warblers. I have therefore adopted the generic name and characters proposed for them by Mr. Selby.

The Grasshopper Warbler, so called from its very peculiar and almost incessant cricket-like note, is a visitor from the South, which comes to this country for the summer, and is first to be heard and occasionally seen about the middle of April, and leaves us again in September. In its habits, it is shy, vigilant and restless, secreting itself in a hedge bottom, and creeping along it for many yards in succession, more like a mouse than a bird; seldom to be seen far from a thicket, a patch of furze, or covert of some sort, and returning to it again on the least alarm. During the breeding season, when bushes and shrubs are clothed with leaves, it is difficult to obtain a sight of this bird; yet, when near its haunt, its note rings on the ear constantly, and, like that of other Aquatic Warblers, may be heard about sunset particularly, and sometimes even during the night. The food of the Grasshopper Warbler is small snails, slugs, and insects.

Unless the old birds are closely watched and seen carrying materials for building or food to their young, the nest is very difficult to find. One discovered by Mr. R. R. Wingate of Newcastle-upon-Tyne, who "watched the bird to the distant passage on the top of a whin-bush by which it entered and left the nest, was built at the bottom of a deep narrow furrow or ditch, overhung by the prickly branches of the whin, and grown over with thick coarse grass, matted together year after year, to the height of about two feet; all of which he was obliged to take away piecemeal before he succeeded in gaining the prize. The nest was composed of coarse dried grass, and contained five beautiful white eggs, closely freckled with carnation spots."

The Grasshopper Warbler is found within a few miles north of London, and also in Surrey. A nest brought me in May 1837, containing five eggs, was cup-shaped, about four inches across over the top, formed externally of coarse grass, and lined with finer bents within. This bird sometimes lays as many as seven eggs, eight lines long by six lines in breadth, of a pale reddish white colour, freckled all over with specks of darker red. I have seen five or six sets of the eggs of the Grasshopper Warbler which did not differ either in colour or marks.

Besides the counties immediately round London, the Grasshopper Warbler has been observed to visit Hampshire, Wiltshire, Dorsetshire, Devonshire, Cornwall, and Wales. It was considered also as a visitor to Ireland by Montagu and the late Mr. Templeton, but is not included in the Catalogue of the Insessorial Birds of that country obligingly supplied me by my friend William Thompson, Esq. of Belfast. In a direction north of London, this species is seen in Suffolk, Norfolk, several parts of Yorkshire, in Cumberland, Northumberland, and Durham, where, according to Mr. Selby, it frequents low shrubby underwood in moist situations. Mr. Rennie, in a note to White's History of Selborne, mentions having seen and heard this species near Edinburgh and in Ayrshire. On the European Continent it frequents during summer the central and southern parts, but is not very numerous. It is rare in Holland, where, M. Temminck says, it frequents the sides of rivers. In Italy and in Sicily it is observed on its passage in the spring only.

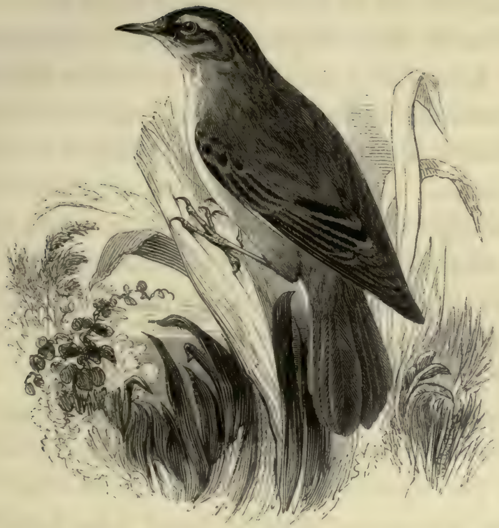
The beak is brown; the base of the under mandible paler in colour than the other parts: the irides hazel; the top of the head, back, and wings, greenish brown; the centres of the feathers darker brown, producing a spotted appearance: the feathers of the tail graduated and of a uniform brown, the ends triangularly pointed. Chin, throat, breast, and belly, pale brown, spotted with darker brown on the neck and breast; under tail-coverts pale brown, streaked along the centre with darker brown; legs, toes, and claws, pale brown.

The whole length five inches and a half. The wings short: from the carpal joint to the end of the longest primary, two inches and three-eighths; the first feather very short; the second longer than the fifth, but not so long as the fourth; the third the longest in the wing.

Females do not differ much from males on the upper parts of the body; but the under parts are destitute of the brown spots on the breast, and are of a uniform pale brown or buff colour, as described by Mr. Heysham of Carlisle from a specimen obtained in that neighbourhood.

INSESSORES.
DENTIROSTRES

SYLVIADÆ.



THE SEDGE WARBLER.

Salicaria phragmitis.

Sylvia	*salicaria,*	*Sedge*	*Warbler,*	Penn. Brit. Zool. vol. i. p. 517.
Motacilla	„	„	„	Montagu, Ornith. Dict.
„	„	„	*Bird,*	Bewick. Brit. Birds, vol. i. p. 253.
Curruca,	„	„	*Warbler,*	Flem. Brit. An. p. 69.
Salicaria phragmitis		„	„	Selby, Brit. Ornith. vol. i. p. 201.
Sylvia	„	„	„	Jenyns, Brit. Vert. p. 106.
Salicaria	„	„	„	Gould, Birds of Europe, pt. xiii.
Sylvia	„	*Bec-fin phragmite,*		Temm. Man. d'Ornith. vol. i. p. 189.

The Sedge Warbler, the second example of this small aquatic division, is more numerous as a species than either of the others, and is generally to be found during summer in most thick patches of reeds or willows in marshes, or on the low sides of rivers, or on islands, where from the loose and soft nature of the soil aquatic herbage grows thick and strong. The Sedge Warbler is a summer visitor to this country, arriving in April and leaving again in September; but on one occasion a single specimen was observed near High Wycombe in Buckinghamshire in winter. Immediately on its arrival it takes to thick cover by the waterside, and is much more frequently heard than seen; though it may occasionally be observed flitting on the uppermost twigs of the willows it inhabits, giving rapid utterance to a succession of notes as it flies from one branch to another. White of Selborne appears to have first made Pennant acquainted with this species, and with his usual acuteness detailed the habits of the bird, particularly remarking its power of imitating the notes of other birds, and its singing at night. The observations of others in various localities have confirmed the accuracy of his remarks; and the Sedge Warbler, in the situations it frequents, may be heard throughout the day and frequently during a summer night, imitating the notes of various birds in a somewhat confused and hurried manner; and should he desist for a few minutes' rest, it is only necessary to throw a stone or a clod of dirt among the bushes, and he will immediately commence a series of repetitions, but seldom quits his covered retreat.

Worms, slugs, and various aquatic insects are the food of this bird.

The nest of the Sedge Warbler has frequently been confounded with that of the Reed Warbler; but it is usually placed much nearer the ground, and seldom depends on reeds for its support. It is frequently placed at or near the bottom of a patch of thick coarse herbage. One nest now before me is composed externally of moss at the bottom; the sides are of grass and coarse bents; the inside rather deep, and thickly lined with hairs. The eggs are five or six in number, eight lines long by six lines in breadth, of a pale yellowish brown colour, slightly mottled, and sometimes streaked with darker brown. These, according to Mr. Jenyns, are hatched towards the end of May or the beginning of June.

The Sedge Warbler, as before observed, is neither so local nor so limited in numbers as the species which here precedes it, or those which follow it.

The marshy banks of the Thames, on either side of the river where beds of willows or reeds abound, are well stocked with this bird; although from the wet and muddy nature of the ground they are not very easy to get at. In the southern and western counties it occurs in Hampshire, Dorsetshire, Devonshire, Cornwall, and in Wales; and from Mr. Wm. Thompson of Belfast, I learn that it is a regular summer visitor to the North of Ireland. It occurs also in the marshes of Essex, in Suffolk, Norfolk, Lincolnshire, Yorkshire, Northumberland, and Lancashire, and was traced by Mr. Selby in Sutherlandshire to the northern extremity of the island: "it was found pretty generally distributed along the margins of the lochs, particularly where low birchen coppice and reedy grass abounded. The well-known babbling notes of this wakeful little bird proclaimed its presence in many unexpected situations." Mr. Hewitson saw it in Norway; M. Nilsson records it as a summer visitor to Sweden; and Pennant, in his Arctic Zoology, says it frequents Russia and Siberia even to the Arctic Circle. It inhabits all the marshes and sides of rivers in Holland; is a common bird in Germany, France, Provence, and Italy, which last country it leaves early in October and returns in April. It is found in Corfu, Sicily, Malta, and Crete. Mr. Strickland saw this species at Smyrna in December.

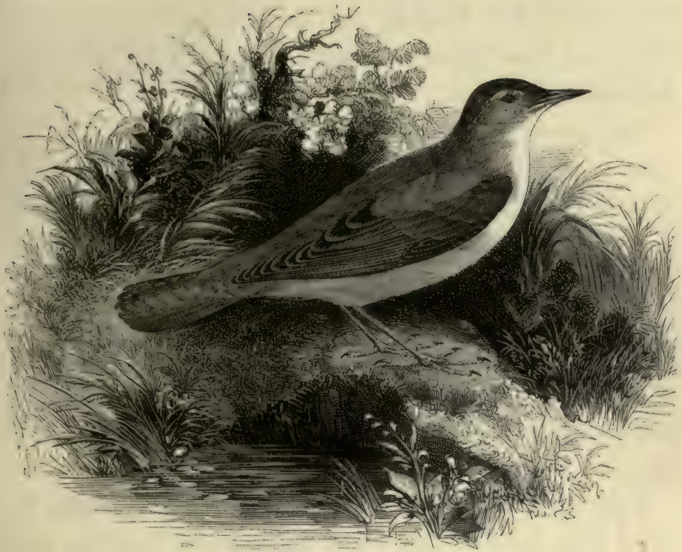
The beak is brown; from the gape to the eye a brown streak; irides brown; from the top of the eye a broad streak of yellowish white passes backward over the ear-coverts; the ear-coverts dark brown; the top of the head streaked longitudinally with dark and light brown, and thus mixed is darker than the plumage of the nape, forming a hood: back and wing-coverts pale reddish brown, clouded with darker brown; quill-feathers dark brown; wing-coverts and tertials edged with pale brown; upper tail-coverts decidedly rufous; tail-feathers uniform brown; the tail rounded, the outside feather on each side being three-eighths of an inch shorter than those of the middle. Chin and throat white; breast, belly, flanks, and under tail-coverts, buff colour, darkest on the flanks; under surface of tail-feathers dusky brown; legs, toes, and claws, pale brown.

The whole length of the bird four inches and three-quarters. This bird is as large in the body as the Grasshopper Warbler; but its tail-feathers are much shorter. From the carpal joint to the end of the longest quill-feather, two inches and a half: the first feather very short; the second and third equal in length, and the longest in the wing.

The female has less of the rufous colour in the upper tail-coverts; and the whole of the under surface from the chin to the vent is darker in colour than the same parts in the male, and has a dingy appearance from being mixed with dusky brown.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



SAVI'S WARBLER.

Salicaria luscinoides.

Sylvia luscinoides,	*Willow Locustelle,*	GOULD, Birds of Europe, pt. xxi.
" "	*Savi's Warbler,*	LUBBOCK, Fauna of Norfolk, p. 34.
" "	*Bec-fin des saules,*	TEMM. Man. d'Ornith, vol. iii. p. 119.

SEVERAL examples of this Warbler have lately been procured in this country. The first specimens were obtained in the fens of Cambridgeshire, in the spring of 1840, by Mr. J. Baker, and by him presented to the British Museum; of these birds a notice was published by Mr. George R. Gray, in the sixth volume of the Annals of Natural History, page 155. Since that time Mr. Joseph Clarke of Saffron Walden, has also obtained a pair of these birds, which are deposited in the Museum at Saffron

Walden, and were obligingly devoted for a time to my use. Since that time, three examples of this species have been obtained in Norfolk, as I learn from the interesting Fauna of that county recently published by the Rev. Richard Lubbock.

Mr. George R. Gray mentions "that this is a rare species in the South of Europe, and was first noticed by Savi in the Nuovo Giornale de Letterai, No. XIV. 1824; again in his 'Ornitologia Toscana, tom. i. p. 270,' under the name of *Sylvia luscinoides*, and is also figured by Savigny in his 'Description de l'Egypt, pl. 13, f. 3.'" It appears to have been noticed by M. Temminck in 1835; it is figured by Pollidore Roux, in his Birds of Provence, and by Mr. Gould in his Birds of Europe. Savi's Warbler has been taken in Malta and in Sicily.

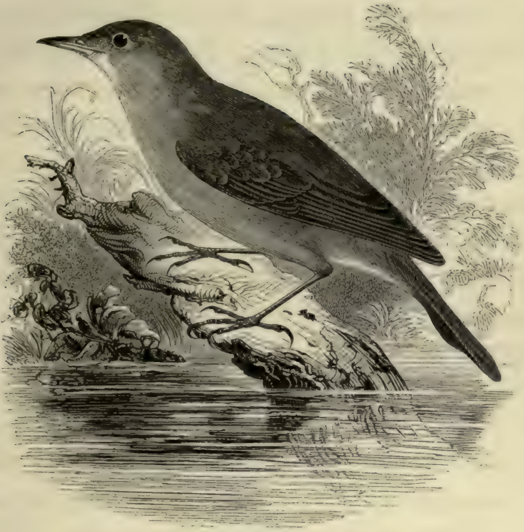
This neat little Warbler belongs, like the Sedge and Reed Warblers, to that small group which frequent moist and shaded situations, among reeds and bushes near water. M. Savi says that it arrives in Tuscany about the middle of April, that it conceals itself among willows and shrubs, creeping about among the low branches, and feeds on worms and insects. The nest and eggs are probably unknown.

The beak is brown; the head, neck above, back wings, and tail-feathers reddish-brown; the latter indistinctly barred across with narrow darker bands; chin and throat almost white; front of neck and breast pale brown; under parts of the body rather darker, but lighter in colour than the upper surface of the body; legs and toes pale brown.

The whole length of the bird five inches and a half; the wing, from the anterior bend, two inches and a half. This bird resembles the Reed Warbler, and was at first mistaken for it; the plumage is, however, like that of the Nightingale.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE REED WARBLER.

Salicaria arundinacea.

Sylvia arundinacea,	*Reed Warbler,*	Penn. Brit. Zool. vol. i. p. 520.
Motacilla „	„ *Wren,*	Montagu, Ornith. Dict.
Sylvia „	*Night Warbler,*	Bewick. Brit. Birds, vol. i. p. 254.
Curruca „	*Reed* „	Flem. Brit. An. p. 69.
Salicaria „	„ *Wren,*	Selby, Brit. Ornith. vol. i. p. 203.
Sylvia „	„ „	Jenyns, Brit. Vert. p. 107.
Salicaria „	„ „	Gould, Birds of Europe, pt. xix.
Sylvia „	*Bec-fin des roseaux,*	Temm. Man. d'Ornith. vol. i. p. 191.

The Reed Warbler appears to have been first made known as a British Bird by the Rev. John Lightfoot, who, in a communication to Sir Joseph Banks, Bart., which was read at the Royal Society, and printed in the volume of Transactions for the year 1785, has well described the habits, plumage, and nest of this species, which, he found frequented the reeds of the river Coln from Harefield Moor to Iver, a distance of about five miles. This bird did not appear in Pennant's Zoology till the edition of 1812.

The Reed Warbler comes to this country in April, and departs again in September; and is in its habits and manners, as well as in the localities it frequents, so similar to the Sedge Warbler, that wherever one species is found, the other is almost certain to be within a short distance; and the birds themselves, from a certain resemblance in appearance, have been frequently confounded: the Reed Warbler, however, is not so abundant as a species, and the distinctions by which it may be always known will be particularly referred to hereafter. Like its aquatic congeners already figured, the Reed Warbler takes care to secrete itself under cover of the bed of reeds or willows it may chance to inhabit; it sings repeatedly in the day, and sometimes also occasionally during the night. Mr. Selby says its song is varied and pleasing, with fewer of the harsh notes that prevail in that of the Sedge Warbler, but is delivered in the same hurried manner. Mr. Sweet, well known for his skill and success in keeping the British Warblers in confinement, says he had a male bird of this species that sung occasionally all winter. The song was very loud and variable, consisting of a great number of notes, and sung with many changes of voice, so diversified as to resemble the song of several different birds. The food of this species in a wild state is very similar to that of the Sedge Warbler, — namely, worms, slugs, various aquatic insects, and the smaller species of dragon-flies. *Libellulæ.*

The nest of this bird is very singularly constructed and sustained. That from which the vignette at the end of this subject was drawn, was supported between four reed stems, and was taken from a bed of reeds on the side of the Thames, the surface soil of which was covered by water every tide, or twice in each twenty-four hours. The nest is formed of the seed-branches of the reeds and very long grass, wound horizontally round and round, including the four upright reeds in the substance; thus forming, with a little wool, the sides of the nest, which frequently measures five inches in depth on the outside, three inches in breadth across the top, and very frequently three inches deep inside; the lining is formed of very fine grass and long hairs. The nest is made so deep that the eggs do not roll out when the supporting reeds are waved by the wind; and Montagu observes, that he has seen the bird sitting on her nest when every gust forced it almost to the surface of the water.

Among the various nests sent me by Mr. J. D. Salmon, was a very beautifully constructed one of this bird, as described to have been found amongst the reeds adjoining the river near Euston Bridge; which nest contained four eggs on the 30th of June 1834. This bird sometimes lays five eggs, which are of a greenish white colour, spotted and freckled with ash-green and light brown; the length nine lines, by six lines and a half in breadth. The young are hatched in July, and quit the nest very soon, hanging and climbing with perfect security among the reeds by their very sharp claws.

The Reed Warbler is found in Essex, Surrey, and Kent, within a few miles of London; it is found also in Suffolk, about Sudbury. In Norfolk, one locality has been mentioned; and the large fresh waters called the Broads, near Yarmouth, with their numerous islands, reeds, and rank aquatic herbage, are very likely situations to harbour it. Mr. Selby mentions that he had not observed this bird north of Northamptonshire: it has now been observed in Staffordshire, Derbyshire, and Lincolnshire; but not beyond, that I am aware of.

Montagu says it was numerous in the southern parts of Kent, about Romney Marsh: it has been found also in Sussex; and Dr. Moore of Plymouth possesses a specimen taken in Devonshire, where, however, it is considered rare. It is also included in Mr. Templeton's Catalogue of the Birds of Ireland, as having been once seen in the vicinity of Belfast.

The Reed Warbler is abundant in Holland; frequents Germany and France; is included among the Birds of Provence by Polydore Roux; and, according to S. Savi, is common in Italy from spring to October. It is found also in Corfu, Sicily, Malta, and Egypt; and Bryan Hodgson, Esq. includes it among the Birds of Nepal.

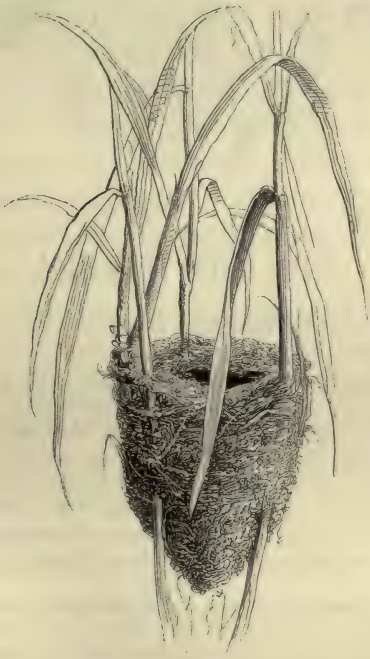
The beak is longer than that of the Grasshopper Warbler or the Sedge Warbler, and rather broader at the base, of a pale brown colour, the under mandible inclining to a yellowish white; the irides brown: the head, neck, and all the upper surface of the body, of a uniform pale brown colour with a tinge of chestnut, the primary quill-feathers being a little darker: the form of the tail rounded, the outside feather being one-quarter of an inch shorter than that in the middle. The chin and throat white; breast, belly, flanks, and under tail-coverts, pale buff, rather lighter in colour along the middle line than on the sides. Legs, toes, and claws, pale brown.

The length of the male bird five inches and a half. From the carpal joint to the end of the longest quill-feather, two inches and five-eighths: the first feather very short; the second, third, and fourth nearly equal in length, the third the longest.

The female is rather less than the male, measuring only five inches in length; but is not otherwise unlike the male.

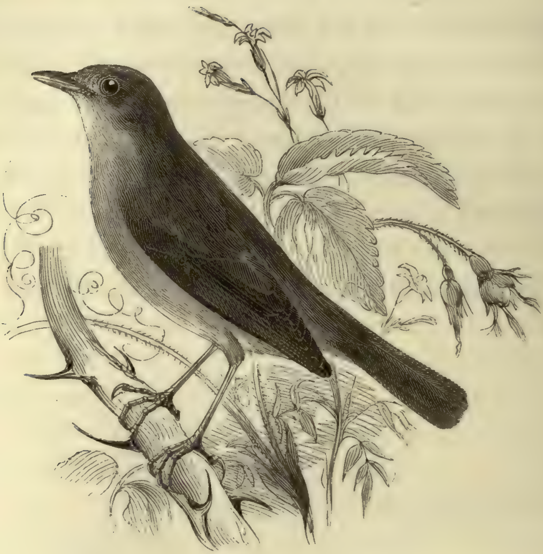
The character of the beak, the entire absence of the buffy white stripe over the ear-coverts, and the uniform colour of the whole of the upper surface of the body of this bird, distinguish it from either the Grasshopper Warbler or the Sedge Warbler, with both of which, however, it has many habits in common.

The vignette below represents the nest of the Reed Warbler, obtained from a reed-bed near the Thames.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE NIGHTINGALE.

Philomela luscinia.

Sylvia	*luscinia,*	*The Nightingale,*	PENN. Brit. Zool. vol. i. p. 494.
Motacilla,	,,	,,	MONTAGU, Ornith. Dict.
,,	,,	,,	BEWICK, Brit. Birds, vol. i. p. 236.
Curruca	,,	,,	FLEM. Brit. An. p. 69.
Philomela	,,	,,	SELBY, Brit. Ornith. vol. i. p. 206.
Sylvia	,,	,,	JENYNS, Brit. Vert. p. 107.
Philomela	,,	,,	GOULD, Birds of Europe, pt. xix.
Sylvia	,,	*Bec-fin Rossignol,*	TEMM. Man. d'Ornith. vol. i p. 195.

PHILOMELA. *Generic characters.* — Bill moderate, straight, upper ridge rounded; the tip of the upper mandible slightly deflected and emarginated. Nostrils basal, lateral, round, pierced in a membrane. Wings of moderate size; the first quill very short, the second equal in length to the fifth, the third the longest in the wing. Tail slightly rounded. Legs long; toes of moderate length; claws rather short.

The Nightingale is admitted beyond dispute to possess in a higher degree than any other British Bird each of the three requisites necessary to form by their combination a first-rate song. The volume, quality, and execution of its voice are unrivalled in this country ; and when the diminutive size of the musician is considered, its powers are certainly very extraordinary. The song of the Nightingale has accordingly been the theme of writers of all ages, and few have expressed their admiration in more fervent or more natural terms than honest Isaac Walton, who loved birds almost as well as he loved fish, and says, "But the Nightingale, another of my airy creatures, breathes such sweet loud music out of her little instrumental throat, that it might make mankind to think that miracles are not ceased. He that at midnight, when the very labourer sleeps securely, should hear, as I have very often, the clear airs, the sweet descants, the natural rising and falling, the doubling and redoubling of her voice, might well be lifted above earth, and say, 'Lord, what music hast thou provided for the saints in Heaven, when thou affordest bad men such music on earth!'"

The Nightingale makes its appearance in this country generally about the middle of April, and the males arrive ten or fourteen days before the females. As the males sing well in confinement, and produce a price in proportion to the perfection of their song, their arrival is taken immediate advantage of. Many are caught by the London bird-catchers during the first week, and these are preserved without difficulty ; but if a male be caught after the females have arrived, and his song and attentions have gained him a mate, he is almost certain not to survive his confinement in a cage ; and hence the desire among the dealers in birds to make the most of the very first of the season.

Among the best judges of the powers of the Nightingale, the birds taken in the county of Surrey are considered to possess the finest quality of song. By particular feeding and judicious management, a male may be kept in song for three months together; and I remember to have heard it stated by a successful keeper of Nightingales, that a bird of his had sung upon one hundred and fourteen successive days.

The localities frequented by the Nightingale are woods having thick undergrowth, low coppices, plantations, and hedgerows. The extensive grounds around London which are cultivated by market-gardeners, are favourite haunts with this bird; low damp meadows near streams are also frequented; and M. Vieillot says they are partial to the vicinity of an echo. From the pairing time to the hatching of the young, the male continues in full song, not only singing at intervals throughout the day, but frequently serenading his partner during the night; and Pennant says, the name of the bird is derived from our term *night*, and the Saxon word *galan*, to sing. The nest of this bird is almost always placed on the ground: advantage is taken of a slight depression in the soil, some dead oak and hornbeam leaves are deposited therein, with a few dried bents and portions of rushes, lined internally towards the bottom with fine fibrous roots; but so loosely constructed, that it is generally necessary to pass thread or string several times round the whole nest, before removing it, if desirous of preserving its form. The eggs are four or five in number, of a uniform olive brown colour, and measuring ten lines in length by eight lines and a half in breadth. The eggs are produced in May, and the young are hatched in June. From this period the song of the male is heard no more; a single low croaking note is uttered as a warning should danger threaten, occasionally changing to a sharp snapping noise, made with the beak, which is considered to be a note of defiance. Colonel Montagu took a nest of young Nightingales early in June, and placing them in a cage, observed that the parent birds fed them principally with small green caterpillars. The adult birds feed on insects of various sorts, flies, moths, spiders, and earwigs.

When we consider that this bird extends its visits during the summer as far north as Russia and Sweden, its very limited range in this country is unaccountable. It is found in Sussex, Hampshire, Dorsetshire, and the eastern part only of Devonshire, along the line of our south coast. It has been heard about Teignmouth and Exmouth, but no farther west in that direction. In north Devon it has been heard near Barnstaple, but not in Cornwall or Wales. A gentleman of Gower, which is the peninsula beyond Swansea, procured from Norfolk and Surrey, a few years back, some scores of young Nightingales, hoping that an acquaintance with his beautiful woods and their mild climate would induce a second visit; but the law of Nature was too strong for him, and not a single bird returned. Dyer, in his Grongar Hill, makes the Nightingale a companion of his muse in the vale of Towey or Carmarthen; but this is a poetical license, as the bird is not heard there. The Nightingale has not hitherto been heard in any part of Ireland.

In a note by Mr. Blyth, in an edition of White's Selborne, it is observed, "The Nightingale, I think, appears to migrate almost due north and south, deviating but a very little indeed either to the right or left. There are none in Brittany, nor in the Channel islands, Jersey, Guernsey, &c.; and the most westward of them probably cross the Channel at Cape La Hogue, arriving on the coast of Dorsetshire, and thence apparently proceeding northward, rather than dispersing towards the west; so that they are only known as accidental stragglers beyond at most the third degree of western longitude,—a line which cuts off the counties of Devonshire and Cornwall, together with Wales and Ireland." Montagu says it is plentiful in Somersetshire; but it is only occasionally heard now in the northern part of that county. It is not included by Mr. Rylands in his Catalogue of the Birds of Lancashire; yet it has been heard on the north-west side of England as high up as Carlisle, but no farther.

On the eastern side, this bird is well known to frequent Essex, Suffolk, Norfolk, some of the more wooded parts of Lincolnshire, and several parts of Yorkshire; but not higher than five miles north of the city of York, as I learn from my friend and correspondent Mr. Thomas Allis. The Nightingale has not, I believe, been heard in Scotland, or in the Scottish islands; which, considering that it does visit Denmark, is also extraordinary. It is said to have been heard in Calder Wood in Mid Lothian, in the early part of the summer of 1826, but I have heard of no recent instance. An attempt to establish the Nightingale in Scotland is thus recorded in a note to an edition of White's Selborne, published in Edinburgh. "It has been generally believed that the migratory songsters, both old and young, return to their native haunts in the breeding season. From this circumstance it is believed, that if any of these could be bred beyond the ordinary limits of their incubation, they would return in the following season to their birth-place. Impressed with this belief, Sir John Sinclair, Bart., long known for his patriotism, commissioned the late Mr. Dickson of Covent Garden to purchase for him as many Nightingales' eggs as he could procure, at a shilling each. This was accordingly done; the eggs carefully packed in wool, and transmitted to Sir John by the mail. Sir John employed several men to find, and take care of, the nests of several Robins, in places where the eggs might be deposited and hatched with security. The Robins' eggs were removed, and replaced by those of the Nightingale, which were all sat upon, hatched in due time, and the young brought up by the foster-parents. The songsters flew when fully fledged, and were observed for some time afterwards near the places where they were incubated. In September, the usual migratory period, they disappeared, but never returned to the place of their birth."

M. Nilsson says that the Nightingale arrives in Sweden by the 1st of May; and Pennant, in his Arctic Zoology, says this bird visits the temperate parts of Russia and some parts of Siberia. It breeds in Germany, France, Spain, Provence, and Italy; but leaves even the most southern parts of this last-named country by the end of September, or early in October, going by Sicily and Malta to pass the winter in North Africa, Egypt, and Syria. Mr. Strickland saw this bird at Smyrna on the 5th of April. It also visits the islands of the Grecian Archipelago. Mr. Blyth has found it in India.

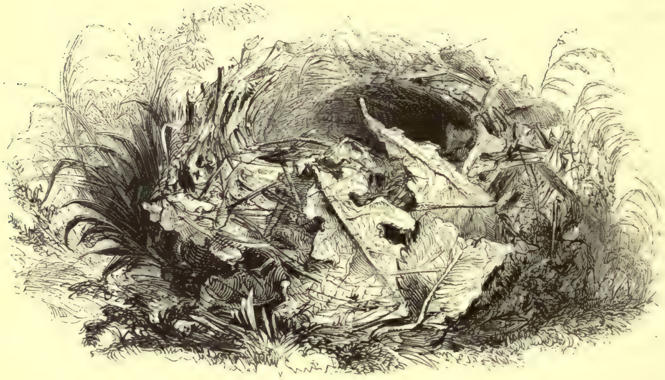
The beak is brown; the irides hazel: the head, and all the upper parts of the body and wings, of a uniform rich brown, tinged with reddish chestnut; the tail-feathers still more rufous, and rather rounded in form: all the under surface of the bird dull greyish white; the chin, and the lower part of the breast, of a lighter tint than the throat and chest; under tail-coverts pale reddish white; legs, toes, and claws, brown.

The whole length of the bird, six inches and three-eighths. From the carpus to the end of the longest primary, three inches and one-quarter: the first quill-feather very short, the second equal in length to the fifth, the third the longest in the wing.

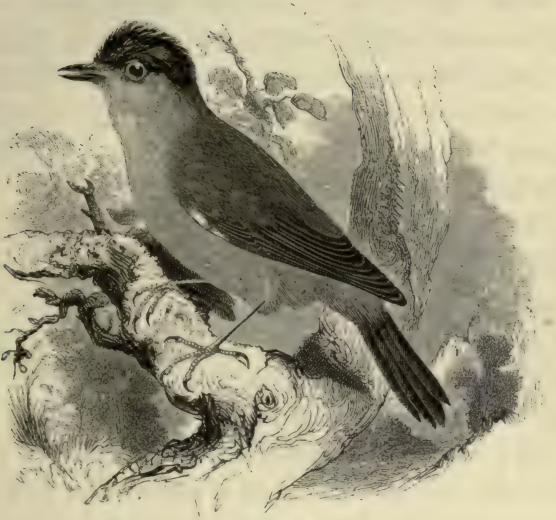
The female in plumage resembles the male.

Young birds have buff-coloured spots on the tips of the feathers of the upper surface of the body; those on the under surface have dark margins.

The vignette below represents the nest of the Nightingale.



INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE BLACKCAP WARBLER.

Curruca atricapilla.

Sylvia	*atricapilla,*	*Blackcap*	*Warbler,*	PENN. Brit. Zool. vol. i. p. 505.
Motacilla	,,	,,	,,	MONTAGU, Ornith. Dict.
,,	,,	,,	,,	BEWICK, Brit. Birds, vol. i. p. 258.
Curruca	,,	,,	,,	FLEM. Brit. An. p. 70.
,,	,,	,,	,,	SELBY, Brit. Ornith. vol. i. p. 209.
Sylvia	,,	,,	,,	JENYNS, Brit. Vert. p. 108.
Curruca	,,	,,	,,	GOULD, Birds of Europe, pt. iii.
Sylvia	,,	*Bec-fin à tête noire,*		TEMM. Man. d'Ornith. vol. i. p. 201.

CURRUCA. *Generic characters.*—Bill rather stout, short; upper mandible slightly curved at the point, which is emarginated; gape with a few hairs. Nostrils basal, lateral, oval, exposed. Wings of moderate size; the first quill-feather very short, the second longer than the fifth, the third the longest in the wing. Legs with the tarsus short, but longer than the middle toe; the toes and claws short, and formed for perching.

THE BLACKCAP is a true Sylvan Warbler, visiting this country from the South and East every spring, arriving about the middle of April, sometimes rather earlier, depending on the state of the season, but never, according to Mr. Selby, till the larch trees are visibly green; and it leaves us again, with an occasional exception, in September. Mr. Lewin, some years ago, it is recorded, shot a Blackcap near Dartford in the month of January; and two or more instances have occurred of specimens being obtained, and others heard, during two recent successive winters, in the neighbourhood of Bristol.

Like the Nightingale, the males of this species, which are readily distinguishable by their jet-black head, arrive some days before the females; and their song soon betrays their retreat. They frequent woods, plantations, thick hedges, orchards, and gardens. They are restless, timid, and shy; and are no sooner observed, but they exhibit their anxiety to gain some place of concealment by hopping from branch to branch to a more secluded situation. The female is equally cautious in selecting the spot for her nest, and does not finally determine upon it till the expanding foliage promises sufficient security, and sometimes even after having commenced and abandoned a nest in two or three different places. The nest is usually fixed in a bush about two or three feet from the ground; it is constructed of bents and dried herbage, lined with fibrous roots mixed with hair. The eggs are mostly five in number, of a pale greenish white, mottled with light brown and ash colour, with a few spots and streaks of dark brown; they are nine lines in length by seven lines in breadth. Some specimens of the eggs of the Blackcap resemble those of the Garden Warbler, the bird next to be described; and they also occasionally assume a reddish tinge, apparently the effect of partial incubation.

The male Blackcap is inferior only to the Nightingale in the quality of his song. White has described the tones of this bird as full, deep, sweet, and loud: like most birds that are gifted with great powers of voice, the Blackcap is an imitator of the notes of several others, and occasionally detracts from the character of his more natural song by the introduction of variations. The male birds of several species share with their females the task of incubating the eggs: this is particularly the case with the male Blackcap, so readily known from the female, as before observed, by his black head; and so gratified apparently is he when performing this part of his duty, as frequently to sing while so occupied, sometimes perhaps producing the destruction of his hopes. A writer in the Magazine of Natural History says, he has several times been led to the discovery of a well-concealed nest by the male singing while sitting on the eggs. The female while taking her turn on the nest is occasionally fed by the male: generally, however, male birds neither sit so steady, so long at one time, or feed the young so assiduously, as the females. The food of this species is berries, insects, and fruit, particularly raspberries and red currants. Mr. Blyth mentions having seen the Blackcap dart into the air after insects, and catch them while on the wing. Bechstein, in his Cage Birds, says, "A young male which I had put into the hothouse for the winter was accustomed to receive from my hand, every time I entered, a meal-worm: this took place so regularly, that immediately on my arrival, he placed himself near the little jar where I kept the meal-worms. If I pretended not to notice this signal, he would take flight, and, passing close under my nose, immediately resume his post; and this he repeated, sometimes even striking me with his wing, till I satisfied his wishes and impatience." And the Blackcap in confinement appears, as well from his habits as from his fine song, to have been a great favourite with the late Mr. Sweet.

The Blackcap visits all the countries along the southern coast of England from Sussex to the Land's End; but, from the communications in reference to Ornithology with which I have been favoured by E. H. Rodd, Esq. of Penzance, this bird is more common in the wooded districts of Cornwall of late years than it was formerly. It visits Wales, and has been taken, once at least, in the North of Ireland, as communicated by Mr. Thompson of Belfast to the Zoological Society. It visits also Suffolk and Norfolk, the northern counties of England, and some parts of Scotland; but I have not been able to find any recorded notice of its appearance in the Scottish Islands. It is, however, included among the summer visitors to Denmark, was seen by Mr. Hewitson in Norway, and according to M. Nilsson, arrives in Sweden about the end of May, and goes as far north as Lapland.

This bird visits also the eastern and central parts of Europe. In Germany it is called the Monk, in reference to the hooded appearance of both male and female. It is found in summer in Spain and Portugal, and at Tangiers. It is an inhabitant of the Azores, where the female is called Red Hood. It is also a resident at Madeira; and M. Temminck has received specimens from the Cape of Good Hope and Senegal. It inhabits North Africa, is resident in the southern part of Italy all the year, frequents Sicily and Crete, and the Zoological Society have received specimens from Trebizond. M. Temminck further states that he has received specimens from Japan, and one skin of a female from Java; and however distant these localities may appear, these specimens presented no perceptible difference.

In the adult male, the beak is dark horn colour; the irides dark brown; all the upper part of the head above the eyes jet black; nape of the neck ash grey; back, wings, and tail, ash brown; chin, throat, and breast, like the nape, ash-grey; belly and under wing-coverts white; under surface of quill-feathers and tail grey; legs and toes lead colour; claws brown.

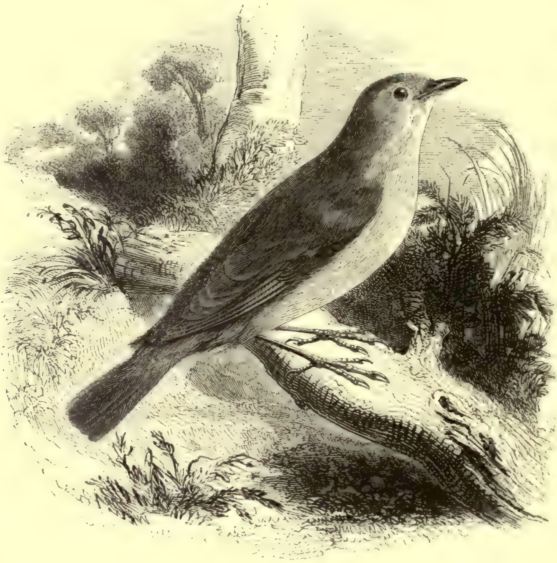
The whole length five inches and three-quarters. From the carpus to the end of the wing, two inches and three-quarters; the first quill-feather very short; the second longer than the sixth, but not so long as the fifth; the third the longest in the wing.

The female is larger than the male, measuring six inches and one-quarter; the top of the head chestnut, and the other parts of the plumage more tinged with brown than that of the male.

Young birds resemble the adult female, but the hood is not so decidedly conspicuous. Young males do not acquire the white belly till after their second summer.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE GARDEN WARBLER.

Curruca hortensis.

Sylvia hortensis,	*Greater Pettychaps,*	Penn. Brit. Zool. vol. i. p. 506.
Motacilla ,,	,, ,,	Montagu, Ornith. Dict.
Sylvia ,,	*Garden Warbler,*	Bewick, Brit. Birds, vol. i. p. 248.
Motacilla passerina,	*Passerine,* ,,	,, ,, ,, ,, 250.
Curruca hortensis,	*Pettychaps,* ,,	Flem. Brit. An. p. 70.
,, ,,	*Greater Pettychaps,*	Selby, Brit. Ornith. vol. i. p. 211.
Sylvia ,,	,, ,,	Jenyns, Brit. Vert. p. 108.
Curruca ,,	*Garden Warbler,*	Gould, Birds of Europe, pt. xix.
Sylvia ,,	*Bec-fin Fauvette,*	Temm. Man. d'Ornith. vol. i. p. 206.

The Garden Warbler is another summer visitor, closely resembling the Blackcap in habits, being lively, active and restless, seldom remaining long in any one place, secreting itself in dense foliage, oftener heard than seen, but sometimes singing from a branch at the top of a tree. As a songster, the Garden Warbler ranks next to the Blackcap; and a good judge of the comparative value of the songs of our birds has described that of the Garden Warbler as a continued strain of considerable modulation, sometimes lasting for half an hour at a time without a pause. The song is wild, rapid, and irregular in time and tone; but the rich depth is wonderful for so small a throat, approaching in deep mellowness even to that of the Blackbird. Bechstein calls its voice flute-like.

The Garden Warbler seldom comes to this country in the spring till towards the end of April or the beginning of May. Mr. Selby remarks that it is rarely seen till the elm and the oak are bursting into leaf: the males arrive before the females. They frequent thick hedges, shrubberies and gardens, feeding on insects, peas, various fruits, —according to the notes of the Hon. and Rev. W. Herbert,* cherries in particular, and some berries. Their nest is placed in a low bush, or among rank herbage. I have found it hid in a row of peas and pea-sticks in a garden, and once among some tares in an open field. Mr. Jesse mentions an instance under his own observation of a Garden Warbler building its nest three times in succession among some ivy growing against a wall; the materials, consisting of goose-grass, bents, with a little wool and moss, lined with fine fibrous roots and a few hairs, are but loosely put together: the eggs are four or five in number, of a greenish white, spotted and streaked with ash green and light brown; the length nine lines, by six lines and a half in breadth. The young are said to remain in the nest till they are well grown and feathered.

This species was first made known to Dr. Latham, as a

---

* In two editions of White's Natural History of Selborne.

British Bird, by Sir Ashton Lever, who observed and obtained specimens in Lancashire, which he sent to Dr. Latham, then residing at Dartford. Since that period it has been found in many other counties of England. Though easily overlooked, it is not an uncommon bird around London among the numerous and extensive gardens in which vegetables and fruit are grown for the supply of the different London markets. It occurs as far to the westward as Devonshire, does not appear to visit Cornwall, nor have I been able to trace any notice of it in Wales. Mr. Thompson of Belfast, in the continuation of his remarks on the Birds of Ireland, published in the first number of the Annals of Natural History, gives the following extract, in reference to the Garden Warbler, from the MS. of the late John Templeton, Esq. "On the 21st of May 1820, I had the pleasure of seeing this bird, to whose haunt in my garden I was attracted by its pleasing melody. It was not very shy, coming near enough to be distinctly seen,—but was extremely restless, flitting every moment from place to place, and only stationary on the branch while it gave out its song. The male continued to sing until the young were reared, when his song ceased for about a fortnight; then it was again renewed, as I suppose, on the construction of a second nest."

From London in a northern direction this bird is found in Suffolk, Norfolk, Lincolnshire, Yorkshire, Durham, and Northumberland. Mr. Selby observes that he has found it throughout the greater part of Scotland, particularly where the wooded districts margin the lakes and rivers. The Garden Warbler also visits Denmark and Sweden. In the latter country, M. Nilsson says it arrives in the middle of May, and departs in August. On the continent of Europe, this bird is found from spring to autumn in all the temperate and southern portions, inhabiting Italy from April to October, and is seen in Sicily when on its northern route in Spring.

The adult male has the beak dark brown; irides hazel; the eyelids white; the head, neck, back, wings, and tail-feathers, of a uniform hair brown: the whole of the under surface of the body from the chin to the ends of the under tail-coverts, dull brownish white, darkest on the neck and chest, and lightest, almost white, on the belly; the under wing-coverts of a delicate buff colour; the legs, toes, and claws, purple brown.

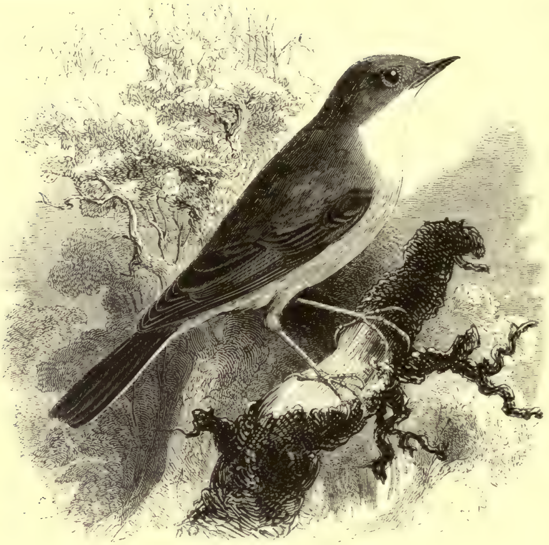
The whole length of the bird rather less than six inches. From the carpal joint to the end of the longest feather in the wing, three inches: the first feather very short; the second longer than the fourth, but not quite so long as the third, which is the longest in the wing.

The female is lighter in colour than the male on the upper surface of the body, and more uniformly greyish brown underneath.

According to Mr. Selby, "the young of the year have the region of the eyes greyish white; head, upper part of the neck, back, rump, and wing-coverts, yellowish brown, passing into oil-green; quills greenish grey, edged with oil-green; cheeks and sides of neck yellowish grey; throat, breast, sides, and under tail-coverts, wine-yellow; middle of the belly white; legs, toes, and claws, pearl-grey."

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE COMMON WHITETHROAT.

Curruca cinerea.

Sylvia	*Cinerea,*	*Whitethroat Warbler,*	Penn. Brit. Zool. vol. i. p. 528.
Motacilla	*sylvia*	,, ,,	Montagu, Ornith. Dict.
,,	,,	,, ,,	Bewick, Brit. Birds, vol. i. p. 260.
Curruca	,,	,, ,,	Flem. Brit. An. p. 71.
,,	*cinerea,*	,, ,,	Selby, Brit. Ornith. vol. i. p. 213.
Sylvia	,,	,, ,,	Jenyns, Brit. Vert. p. 109.
Curruca	,,	*Common Whitethroat,*	Gould, Birds of Europe, pt. v.
Sylvia	,,	*Bec-fin Grisette,*	Temm. Man. d'Ornith. vol. i. p. 207.

The Common Whitethroat is probably more numerous as a species, and more generally diffused here, than any other of those summer warblers which annually visit this country. It makes its appearance about the third week in April, and frequents the sides of great woods, thickets, hedge-rows with broad banks, and grassy lanes partially overgrown with low brambles, nettles, and other wild weeds or herbage; hence one of the most common provincial names by which this bird is known, that of Nettle Creeper. The males of this species arrive, as in several instances among our warblers, before the females; and both are active, vigilant, and shy, easily alarmed, and retreating immediately into the seclusion afforded by the thick underwood and coarse vegetation of their favourite haunts. The nest is sometimes placed in a low bush, or among a tangled mass of long grass, weeds, and brambles. It is occasionally placed near the ground, and very seldom more than three feet above it. A nest before me is formed on the outside almost entirely of dried grass stems; but the sides are very thin, lined with finer bents, and a few of the flowery heads of grass. The eggs are four or five in number, of a greenish white ground, spotted and speckled with ash-brown, and two shades of ash-green; the long diameter nine lines, transverse diameter six lines and a half. Mr. Jenyns says, the first brood is fledged about the end of May.

The food of this species consists of insects in their various states, particularly white caterpillars, and most of the smaller sized fruits and berries, to obtain some of which they visit the kitchen garden, and bring their young with them in July and August. Some of the notes of the voice of this bird are rather harsh, others are pleasing, though too frequently repeated; but he always sings in earnest, erecting his crest, puffing out his throat, shaking his wings, jerking his tail, and other movements, which mark his zeal and agitation. Occasionally he sings on the wing, ascending with a peculiar flight, rapidly describing small circles, and after a few turns descending to the spot from which he arose. They are equally lively and entertaining when kept in confinement, and easily preserved in health. Mr. Sweet says of the Whitethroat, "One that I at present possess will sing for hours together against a Nightingale, now in the beginning of January, and it will not suffer itself to be outdone; when the Nightingale raises its voice, it also does the same, and tries its utmost to get above it; sometimes in the midst of its song it will run up to the Nightingale, and stretch out its neck as if in defiance, and whistle as loud as it can, staring it in the face; if the Nightingale attempts to peck it, away it is in an instant, flying round the aviary, and singing all the time. It is readily taken in a trap baited with a living caterpillar or butterfly. One that I caught last spring sung the third day after being in confinement, and continued to sing all through the summer; but this was most likely in consequence of a tame one being with it, which also sung at the same time."

The Whitethroat is plentiful in summer in the southern counties of England from Sussex to Cornwall; and, according to Mr. Thompson, is a regular summer visitor throughout Ireland. Northward from London it may be traced to Northumberland and Durham; but appears to decrease in numbers in northern counties. Mr. Rennie is mentioned as having seen it in Argyleshire; and Mr. Selby observed it in two localities in Sutherlandshire.

The Whitethroat visits Denmark, Norway, Sweden, Russia, and Siberia: it is also common during summer in Germany, Holland, France, Provence, Spain, Sardinia, Italy, Sicily, and Crete, remaining in the more southern countries from April to October. Mr. Strickland saw it at Smyrna; and the Zoological Society have received specimens from Trebizond.

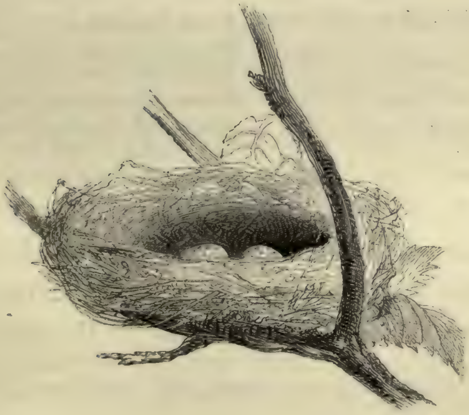
The beak is brown; the irides hazel; the head and neck smoke-grey, tinged with brown; the back, wing-coverts, and upper tail-coverts, reddish brown; quill-feathers blackish brown; secondaries and tertials broadly edged with bright chestnut; great part of the outer tail-feather on each side dull white, and rather shorter than the rest; all the others dark brown, with lighter margins; chin and throat white; lower part of the neck, the breast, belly, flanks, and under tail-coverts, pale brownish white, tinged with rose colour; under surface of wings and tail-feathers grey; legs pale wood-brown; toes and claws darker brown.

The whole length five inches and a half. From the carpal joint to the end of the wing, two inches and five-eighths: the first quill short; the second and third equal in length, and the longest in the wing.

The female is without the rosy tints on the breast, and the other colours of the plumage are less pure.

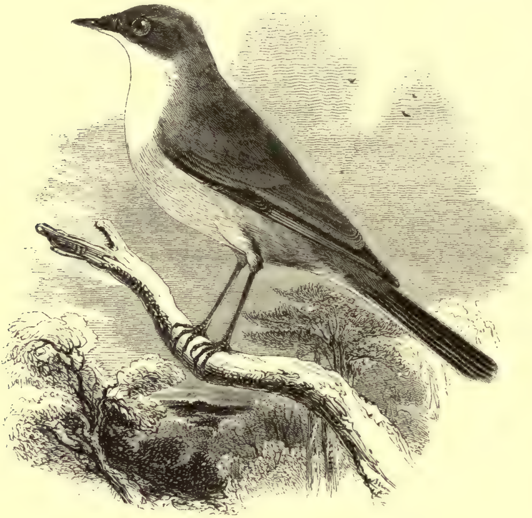
Young birds have a light coloured space between the beak and the eye; the irides yellowish brown; the outer tail-feather on each side tinged with red.

The vignette below represents the nest of the Lesser Whitethroat, the species next to be described.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE LESSER WHITETHROAT.

Curruca sylviella.

Sylvia sylviella,	*Lesser Whitethroat,*	Penn. Brit. Zool. vol. i. p. 529.
„ „	„ „	Montagu, Ornith. Dict.
Motacilla „	„ „	Bewick, Brit. Birds, vol. i. p. 262.
Curruca „	„ „	Flem. Brit. An. p. 71.
„ *garrula,*	„ „	Selby, Brit. Ornith. vol. i. p. 215.
Sylvia curruca,	„ „	Jenyns, Brit. Vert. p. 109.
Curruca garrula,	„ „	Gould, Birds of Europe, pt. v.
Sylvia curruca,	*Bec-fin Babillard,*	Temm. Man. d'Ornith. vol. i. p. 209.

This pretty warbler was first discovered in this country by the Rev. Mr. Lightfoot:* he found it near Bulstrode in Buckinghamshire, and sent specimens to Dr. Latham, who inserted a figure and description of it in the first supplementary volume of his General Synopsis of Birds, page 185. This warbler visits many parts of England every year, arriving about the third week in April. In many of its habits it closely resembles those of the three warblers which immediately precede it in this work, is inferior to them in the quality of its song, but is equally active and restless. It frequents high and thick hedges, shrubberies, orchards, and gardens, and is occasionally to be seen and heard in lofty trees. The louder notes of this bird have nothing particular in their tone to recommend them; but in a wild state, if approached with sufficient caution to prevent alarm, or when kept in confinement, a low, soft, and pleasing whistle, may be heard, which is almost incessant, so much so as to have induced the application of *garrula*, and *babillard*, as terms of specific distinction.

---

* The first discoverer also, in this country, of the Reed Warbler, as mentioned at page 295.

The food of this species is also very similar to that sought for by the Common Whitethroat,—namely, insects in their various states, the smaller fruits of many different sorts, for which it visits the gardens, and later in the season it feeds on the berries of the elder, and some others. It is not, however, so easy to preserve this bird in health during confinement as the Common Whitethroat.

The nest is frequently placed among brambles or low bushes: it is slight in structure, generally formed on the outside with strong bents, lined inside with finer bents, fibrous roots, and horse-hair. As this bird is readily distinguished from the more Common Whitethroat by being rather shorter, as well as more slender in its form, so are its eggs rather smaller, measuring but eight lines in length, by six lines in breadth; the ground colour white, sparingly spotted and speckled, principally at the larger end, with ash grey and light brown. The eggs in number are four or five; and Mr. Jenyns has remarked that incubation commences about the 20th of May.

The Lesser Whitethroat is by no means an uncommon bird around London, but is observed to be much more plentiful in some seasons than it is in others. South and west of London it visits Hampshire, Wiltshire, Devonshire, Somersetshire, and Gloucestershire; is rare in Cornwall and Wales, and has not, I believe, been identified as a visitor to Ireland. It frequents Suffolk, Cambridgeshire, Norfolk, the enclosed parts of Lincolnshire, Derbyshire, Yorkshire, and Durham, in which latter county it frequents strong and thick whin or furze-bushes. Farther north in Northumberland it becomes more rare, according to Mr. Selby; but extends, though probably in still more limited numbers, to Scotland. Mr. Rennie, who appears to be well acquainted with this bird, mentions having seen it at Musselburgh Haugh, near Edinburgh, and also in Ayrshire. It visits Denmark, and arrives in Sweden by the 20th of May; it also visits the southern part of Russia, as well as the more temperate and warmer parts of the European Continent, including Spain and Portugal, but quits them, and even Genoa and Italy, in September. It is common in Sicily and in Egypt. M. Temminck says, it is abundant in Asia; and Colonel Sykes obtained examples in the Dukhun, which only differed from some English specimens in having a reddish tint on the white of the under surface; but Mr. Blyth mentions, in some remarks on this species in the Naturalist, and also in a note to an edition of White's Selborne, that he has seen this rosy tint on specimens obtained in this country; I may here also quote in corroboration, part of a letter received from my kind friend the Rev. W. F. Cornish of Totness, who is very successful in his treatment of our small singing birds in confinement, which is, "I have reared the Lesser Whitethroat, two males and a female; the males had a beautiful tinge of carmine on their breast."

In the adult male the beak is nearly black; the base of the under mandible yellowish brown; the irides yellowish white; and in some very old birds pearl white; the head, neck, and back, smoke-grey; the ear-coverts almost black; quill-feathers blackish brown, the tertials edged with lighter brown; tail-feathers blackish brown, except the outer feather on each side, which is nearly white; chin, throat, breast, and belly, nearly pure white, the latter tinged with red as far as the vent; sides and flanks tinged with grey; under surface of wing and tail-feathers grey; legs, toes, and claws, lead colour.

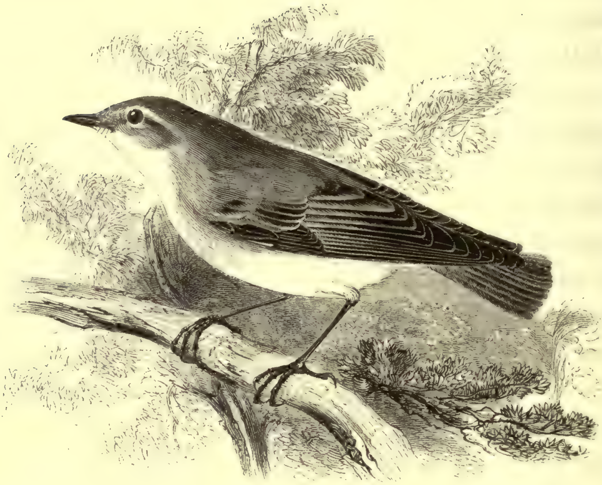
The whole length five inches and a quarter. From the carpal joint to the end of the primaries, two inches and five-eighths: the first feather very short; the second feather rather shorter than the third or fourth, which are equal in length, and the longest in the wing.

The female is not quite so large as the male; the grey colour of the head and neck is tinged with brown; the ear-coverts not so dark in colour, and the white of the under surface of the body is less pure, being clouded with grey.

Young birds resemble the female, and have the eyes reddish hazel.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE WOOD WARBLER.

Sylvia sylvicola.

Sylvia	*sylvicola,*	*Wood*	*Warbler,*	Penn. Brit. Zool. vol. i. p. 512.
„	„	„	*Wren,*	Montagu, Ornith. Dict.
Motacilla trochilus,		*Yellow*	„	Bewick, Brit. Birds, vol. i. p. 264.
Curruca sibillatrix,		*Wood*	„	Flem. Brit. An. p. 70.
Sylvia,	„	„	„	Selby, Brit. Ornith. vol. i. p. 224.
„	„	„	„	Jenyns, Brit. Vert. p. 110.
„	„	„	„	Gould, Birds of Europe, pt. i.
„	„	*Bec-fin Siffleur,*		Temm. Man. d'Ornith. vol. i. p. 223.

Sylvia.—*Generic Characters.*—Beak straight, slender, conical, pointed, slightly notched at the tip; sides compressed; base furnished with fine hairs. Nostrils basal, lateral, oval. Wings, with the first quill very short; the second shorter than the third, the third the longest in the wing. Legs, with the tarsi longer than the middle toe; toes, three before, one behind; the outer toe joined at the base to the middle toe.

The Wood Warbler, though called *Motacilla trochilus* by Gilbert White of Selborne, was clearly distinguished by him from the two most nearly allied species, and particularised in his letters to his friend Pennant in the year 1768, but the bird does not appear to be included in the edition of the British Zoology published in 1776. The first edition of White's Natural History of Selborne, which contained several notices of this bird, was published in 1789. In November 1792, Mr. Thomas Lamb supplied some particulars of this same bird to the Linnean Society, which were published in the second volume of the Transactions of the Society; and in 1796 Colonel Montagu, having seen and heard this species in various localities in several western counties, and having obtained also some specimens, nests, and eggs, furnished further particulars to the Linnean Society, which were published in the fourth volume of the Transactions. This bird is now very well known, and is at once distinguished from the true *trochilus*, or Willow Warbler, with which it is most likely to be confounded, by the broad streak over the eye and ear-coverts of a bright sulphur-yellow, by the pure green colour of the upper parts of the body, and by the delicate and unsullied white of the belly and under tail-coverts. In addition to these distinctions, which on comparing the two birds will be found very obvious, the wing of the Wood Warbler is nearly half an inch longer from the carpal joint to the end of the quill-feathers than that of the Willow Warbler, although the birds themselves differ but little in their respective whole lengths: the wings of the Wood Warbler when closed reaching over three-fourths of the length of the tail, while those of the Willow Warbler, next to be described, reach only to the end of the upper tail-coverts, or less than half way along the tail-feathers. The two birds here named, and a third species, the Chiff Chaff, so called from its particular note, are the only British species now included in the genus *Sylvia*, as at present restricted. They differ from the Warblers already described in the general colour of their plumage; in not being fruit eaters; they almost invariably build their nests on the ground, and their nests are covered or domed at the top, like that of the Dipper, already figured at page 186, and the little birds creep into the hollow chamber within by a small round hole, generally left in the side.

The Wood Warbler seldom arrives even in the southern parts of England till near the end of April, the males, as in some other instances, making their appearance a week or ten days before the females. In Northumberland, Mr. Selby says, this bird does not appear till the elm and the oak are bursting into leaf; and that gentleman considers, from repeated observations, that with all our summer visitants there is a difference of ten days or a fortnight between their arrival in the southern and northern parts of the kingdom.

The Wood Warbler is generally distributed through the wooded districts, preferring old plantations and woods containing tall trees, particularly those of oak or beech. The males commence their simple song soon after their arrival, and may frequently be heard from a lofty elm in a hedge row. The note resembles the word *twēē*, sounded very long, and repeated several times in succession, at first but slowly, afterwards much quicker, and when about to conclude is accompanied by a peculiar tremulous motion of the wings, which are lowered by the side. The note is also occasionally uttered while the bird is on the wing from one place to another. The song is continued throughout the greater part of the summer, and the bird leaves this country in September.

The Wood Warbler neither eats fruit nor berries; its food appears to be insects and their larvæ; some are taken on the wing, and others are sought for among the upper foliage of trees. The nest is oval, and domed over, always placed on the ground among herbage, and is formed of dry grass, dead leaves, and some moss, and invariably lined with finer grass and long hairs, but no feathers, which are used as lining to some extent by both the other species of this genus, and serve to distinguish their nests, which are also placed on the ground, from that of the Wood Warbler.

This bird lays six eggs, white, spotted, and speckled all over, almost hiding the ground colour, with dark purple red and ash colour; the eggs eight lines in length by six lines in breadth.

The Wood Warbler is not uncommon in the metropolitan counties, and visits also all those to the south and the west as far as Devonshire; but though Colonel Montagu includes Cornwall also, I am unable to quote any recent authority for its appearance in that county lately. It is found in Wales, but has not been identified to a certainty as a visitor to Ireland. It is rare in Cambridgeshire, as observed by Mr. Jenyns, but is found in Suffolk, Norfolk, Derbyshire, Yorkshire, Durham, and Northumberland; but I am not aware of any record of its appearance in Scotland. M. Nilsson includes this species among the summer visitors to Sweden, but considers it rare; it is also rare in the more northern parts of Europe generally; but is common in Germany, Holland, France, and Provence, quitting Genoa and Italy, Sicily and Malta, by the end of September, and passing the winter, according to S. Savi, in Egypt and Asia.

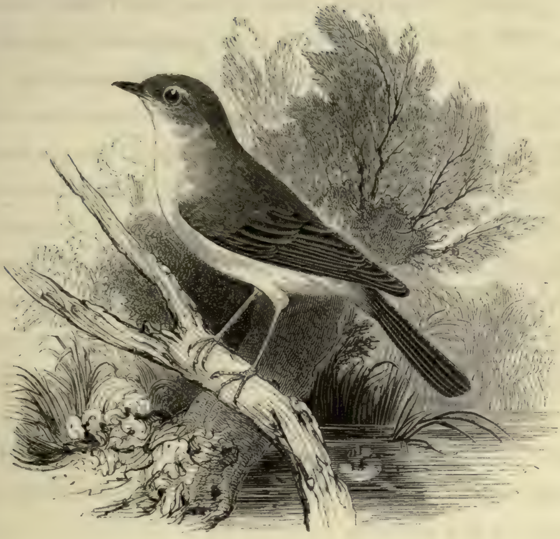
The adult male has the beak blackish brown, but lighter in colour along the edges of the mandibles; the irides hazel; a streak of bright sulphur-yellow passes from the base of the upper mandible, behind the nostril, over the eye, and over the ear-coverts; the upper part of the ear-coverts, the top of the head, neck, smaller wing-coverts, back, and upper tail-coverts, olive-green, tinged with sulphur-yellow; smaller wing-coverts slate-brown, edged with yellow; all the quill-feathers slate-brown; the primaries and secondaries with a narrow outer edge of bright yellow, the tertials with a broader edge of yellowish white; tail-feathers slate-brown, with the outer edge yellow, the central pair rather shorter than the others; the chin, throat, breast, and flanks, delicate sulphur-yellow; belly, and under tail-coverts, clear white; under surface of wings and tail grey; legs, toes, and claws, brown, sometimes dark brown.

The whole length of some specimens, five inches and one quarter; but the average measurement of many specimens is rather less. From the carpal joint to the end of the longest quill-feather, three inches: the first feather very short; the second feather rather longer than the fifth; the third the longest of the whole; the wings when closed reaching over three-fourths of the length of the tail.

Females do not differ much from males either in size or colour.

Most of our Warblers begin to moult as soon as their breeding season is over, and complete their moult before they migrate; but Mr. Hoy informs me that the Wood Warblers remain in their old plumage and migrate before they change their feathers.

INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE WILLOW WARBLER.

Sylvia Trochilus.

Sylvia	*trochilus,*	*Yellow*	*Warbler,*	PENN. Brit. Zool. vol. i. p. 511.
Motacilla	,,	,,	*Wren,*	MONTAGU, Ornith. Dict.
		Willow	,,	BEWICK, Brit. Birds, vol. i. p. 266.
Regulus	,,	*Yellow*	,,	FLEM, Brit. An. p. 72.
Sylvia	,,	,,	,,	SELBY, Brit. Ornith. vol. i. p. 226.
,,	,,	*Willow*	,,	JENYNS, Brit. Vert. p. 111.
,,	,,	,,	,,	GOULD, Birds of Europe, pt. i.
,,	,,	*Bec-fin Pouillot,*		TEMM. Man. d'Ornith. vol. i. p. 224.

THE WILLOW WARBLER visits this country every spring rather earlier in the season than the bird last described, but about the same time as the Blackcap. Around London, and in the southern counties of England, it is generally seen and heard by the middle of April; and Mr.

Selby has noticed its appearance in Northumberland as soon as the larch trees become visibly green. The Willow Warbler is to be found in greater numbers, as well as more generally dispersed, than either the Wood Warbler or the Chiff Chaff, with which it is generically united, and with both of which it is sometimes confounded. This bird is, however, readily distinguished from the Wood Warbler by the darker olive green tint of the plumage of the upper parts of the body; by the light-coloured streak over the eye being smaller, and not so well defined; by all the under surface of the body, and under tail-coverts being tinged with yellow; and by the shortness as well as by the structure of the wing, the second feather of which is equal in length to the sixth. From the Chiff Chaff, next to be described, it is best distinguished by its pale brown legs, which in the Chiff Chaff are very dark brown, or nearly black, with the second feather of the wing equal in length to the seventh.

The Willow Warbler frequents woods, plantations, shrubberies, thick hedge-rows, and bushes on commons, is lively and amusing in its actions, hopping or flying from branch to branch, and capturing any small insect that comes in its way. Its song, though possessing but little variety, is soft and pleasing, sometimes given from a high tree, and occasionally while on the wing, passing from place to place. The nest is built on the ground; and one of the situations most commonly chosen for it is a wood hedge-bank among long grass and coarse herbage. The nest is oval or rounded in form, composed externally of moss and grass, with a hole in the side through which the bird creeps to the hollow space within, which is lined with feathers. The eggs are six or seven in number, white, with numerous small specks of pale red; the length of the egg seven lines and a half, and six lines in breadth. Mr. Henry Doubleday tells me he has seen the eggs of this bird of a pure unspotted white. The food of this species is flies, aphides, and insects generally in their different states. It does not eat fruit; and when seen in a garden should be allowed to remain unmolested as one of the gardener's best friends, from the number of insects it consumes daily.

A remarkable instance of the attachment of this bird to its nest is thus recorded in the Field Naturalist by a lady. "In the spring of 1832, walking through an orchard, I was attracted by something on the ground in the form of a large ball, and composed of dried grass. I took it up in my hands, and upon examination found it was a domed nest of the Willow Wren, *Sylvia trochilus.* Concerned at my precipitation, I put it down again as near the same place as I could suppose, but with very little hope that the architect would ever claim it again after such an attack. I was, however, agreeably surprised to find, next day, that the little occupier was still proceeding with his work. The feathers inside were increased, as I could perceive by the alteration in colour. In a few days, two eggs were laid, and I thought my little protégé safe from harm, when a flock of Ducks, that had strayed from the poultry-yard, with their usual curiosity, went straight to the nest, which was very conspicuous, as the grass had not grown high enough to conceal it, and with their bills spread it quite open, displaced the eggs, and made the nest a complete ruin. I now despaired; but immediately on driving the authors of the mischief away, I tried to restore the nest to something like its proper form, and placed the eggs inside. That same day I was astonished to find an addition of another egg; and in about a week four more. The bird sate; and ultimately brought out seven young ones; but I cannot help supposing it a singular instance of attachment and confidence, after being twice so rudely disturbed."

The young are hatched by the end of May, or the beginning of June. Mr. Sweet says this species soon become very tame in confinement.

The Willow Warbler is plentiful in the counties around London, and in a westerly direction visits Hampshire, Wiltshire, and Dorsetshire. Colonel Montagu states that at the date of his observations, this bird did not go so far west as Devonshire and Cornwall, and there is no reason to suppose that he was mistaken; but from whatever cause it may arise, this bird is now become a constant summer visitor, not only to Devonshire and Cornwall, but to Wales: it was seen also in the summer of 1834 by a party of naturalists in the district of Connamara in the west of Ireland; and according to Mr. Thompson of Belfast, it is a regular summer visitor to the North of Ireland. In a direction eastward and northward of London, this bird is plentiful in Essex, Suffolk, Norfolk, Derbyshire, Durham, and Northumberland. It is probably found in various parts of Scotland, since Mr. Selby observed it in Sutherlandshire in the summer of 1834, even to the extremity of the island, and says, "it was noticed wherever copse or brushwood abounded. About Tongue it was very plentiful, and the same at Laing, the margins of Loch Naver, and the wooded banks of Loch Assynt, but it was the only species of the genus *Sylvia* seen there."

I have been unable to trace this bird to the Scottish islands; yet it visits Denmark, is known to arrive in Sweden before the end of April, and was seen by Mr. Hewitson in Norway. On the Continent of Europe, in summer, this bird is common: it is plentiful in Spain and Provence; appears about Genoa in April, and remains till September; and is common in Italy, is found at Corfu, Sicily, Malta, Algeria, Nubia, and Egypt. Mr. Strickland saw it in Asia Minor, the Zoological Society have received specimens from Trebizond; and B. H. Hodgson, Esq. includes it among the birds of Nepal.

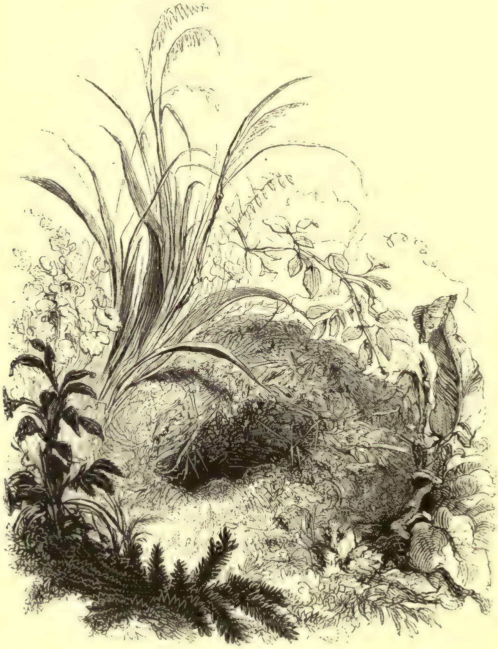
In the adult male the beak is brown; under mandible pale yellow brown at the base; irides hazel; a narrow light-coloured streak over the eye; crown of the head, neck, back, and upper tail-coverts, dull olive-green; wing and tail-feathers darker brown, the former edged with green; the tertials to a greater extent than the primaries: the tail slightly notched, the two middle feathers being a trifle shorter than the others; chin, throat, and breast, whitish, but strongly tinged with yellow; belly almost white; flanks, and under tail-coverts, like the feathers on the front of the neck, tinged with yellow; under wing-coverts bright yellow, some of which extend over the outer edge of the wing, from the carpal joint to the bastard or spurious wing-feathers; under surface of wing and tail-feathers greyish brown; legs, toes, and claws, pale brown.

The whole length of the bird about five inches; from the carpal joint to the end of the longest primary, two inches and a half; the first quill-feather short; the second equal in length to the sixth, but not so long as the fifth; the third, fourth, and fifth feathers, nearly equal in length, and the longest in the wing.

The females scarcely differ from the males either in size or plumage; and these birds moult as soon as the breeding season is over.

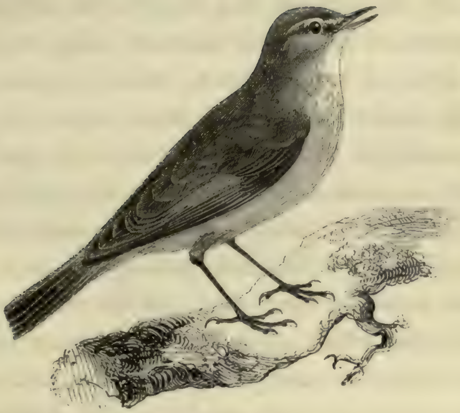
Young birds in their nestling feathers resemble the parent birds in the colour of their plumage; but in the autumn after their first moult the whole of the under surface of the body is more decidedly yellow than the same parts in the parent birds at the same season, and this yellow colour is retained to some extent till after their re-appearance here in the following spring, so that it is not difficult to select the birds of the previous year from those which are older.

The vignette below represents the nest of the Wood Warbler, which resembles also that of the Willow Warbler, but there is this distinction in the materials, which is, I believe, constant; I have never seen a nest of the Wood Warbler with any feathers in it, or the nest of the Willow Warbler without feathers.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE CHIFF CHAFF.

Sylvia hippolais.

Sylvia hippolais,	*Lesser Pettychaps,*	Penn. Brit. Zool. vol. i. p. 508.
Motacilla ,,	,, ,,	Montagu, Ornith. Dict.
	Chiff Chaff,	Bewick, Brit. Birds, vol. i. p. 267.
Trochilus minor,	*Least Willow Wren,*	,, ,, ,, ,, 268.
Regulus hippolais,	*Lesser Pettychaps,*	Flem. Brit. An. p. 72.
Sylvia ,,	,, ,,	Selby, Brit. Ornith. vol. i. p. 222.
,, ,,	*Chiff Chaff,*	Jenyns, Brit. Vert. p. 111.
,, ,,	,, ,,	Gould, Birds of Europe, pt. i.
,, *rufa,*	*Bec-fin veloce,*	Temm. Man. d'Ornith. vol. i. p. 225.

With the exception of the Wheatear, the diminutive Chiff Chaff is the first of the warblers that visits us in spring, and by his sprightly actions, as well as his oft-repeated double-note, resembling the two syllables, 'Chiff, Chaff,' from which he derives his name, is always a welcome visitor as one of the first harbingers of returning fine weather. This hardy little bird has been seen as early as the 12th and 14th of March; by the 20th several have been noticed, and they are frequently heard in the woods before the trees are in leaf to hide them. On their first arrival they are said to feed chiefly "on the larva of the different species of *Tortrix* that are rolled up in the unfolding buds of various trees, rendering good service in devouring those insects that would otherwise destroy a great part of the fruit. If the weather is fine and mild, they may be seen among the most forward trees in orchards, flying from branch to branch, and from tree to tree, chasing each other, and catching the gnats and small flies that come in their way. In the summer they feed on the aphides which infest trees and plants, and they are also very partial to small caterpillars, flies, and moths."

These birds frequent shady woods, hedgerows, and bushes; and their song, sometimes given while the bird is on the wing, and frequently from a branch of a tall tree, consists, as before mentioned, of two notes repeated several times in succession.

The nest is in form like that of the Willow Warbler, oval, or rounded, with a hole in the side by which the little bird enters. The outside of the nest is composed of dried grass, dead leaves and moss, lined with a profusion of feathers. It is generally placed on or near the ground in a hedgebank, sometimes raised a little above the ground in a low bush. Mr. Henry Doubleday sent me notice of an instance in which he found the nest of this bird, formed externally of dead leaves, placed in dead fern, at least two feet from the ground; and Mr. Hewitson mentions another, at an equal elevation, that was built in some ivy against a garden wall. The eggs are usually six in number, about seven lines in length by five lines and a half in breadth, white with a few specks of dark purplish red.

As this little bird is one of the first to arrive here in the spring, so is it also one of the last to leave us in autumn, and it is frequently heard and seen as late as the middle of October. Montagu states in his Supplement that he saw this species several times in the winters of 1806 and 1808 in Devonshire; and Mr. Neville Wood, as mentioned by Mr. Hewitson, has heard its note as early as the 5th of February; but on the occurrence of an unusually late spring, the song was not heard by the same gentleman in the north of England till the 21st of April.

Mr. Sweet says, "The Chiff Chaff is easily taken in a trap, and soon becomes tame in confinement. One that he caught was so familiar as to take a fly from his fingers; it also learned to drink milk out of a tea-spoon, of which it was so fond that it would fly after it all round the room, and perch on the hand that held it, without showing the least symptom of fear; it would also fly up to the ceiling, and bring down a fly in its beak every time."

The Chiff Chaff is nowhere so abundant as the Willow Warbler; it is, however, found, though few in number, in all the southern counties from Sussex to Cornwall and Wales; but Mr. Thompson sends me word it is not so abundant in Ireland as *Sylvia trochilus.* It is found in Essex, Suffolk, Norfolk, Derbyshire, Westmoreland, Yorkshire, Durham, and Northumberland; but further to the north in this country I am unable to trace it. Mr. Hewitson noticed it in Norway; and on the European Continent, in summer, it is generally distributed to the shores of the Mediterranean, and is even common in Italy in winter. It is found at Corfu, Sicily, and Malta, and was also seen by Mr. Strickland at Smyrna in November.

Mr. Blyth has found this species in the neighbourhood of Calcutta.

This little bird has the beak shorter and narrower at the base than that of the Willow Warbler; the legs very dark brown, and the general tone of the colour of the plumage has more of brown and less of green than that bird; it is on this latter account, probably, that the Chiff Chaff has also been called the Lesser Pettychaps, its plumage bearing some resemblance to the brown colour of that of the Garden Warbler, which has been frequently called the Greater Pettychaps as shown by the synomymes.

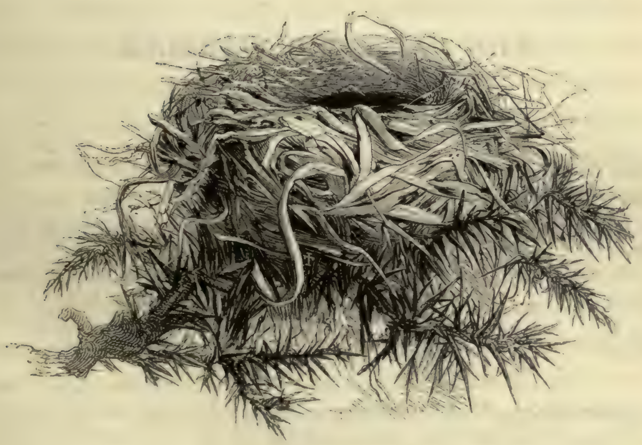
The adult male has the beak dark brown; the irides brown; over the eye a light-coloured streak, sometimes rather obscure; the head, neck, back, wings, and tail-feathers, nearly a uniform ash-brown; the quill-feathers rather darker than the other parts, the edges of the tertials rather lighter; the chin, throat, breast, belly, and under tail-coverts, dull brownish white, tinged with yellow; under wing-coverts primrose-yellow; under surface of wing and tail-feathers grey; legs, toes, and claws, dark brown, almost black.

The whole length of the bird about four inches and three-quarters. From the carpus to the end of the longest primary two inches and three eighths: the first feather short; the second about as long as the seventh, and neither of them so long as the fifth or sixth; the third and fourth nearly equal in length, and the longest in the wing.

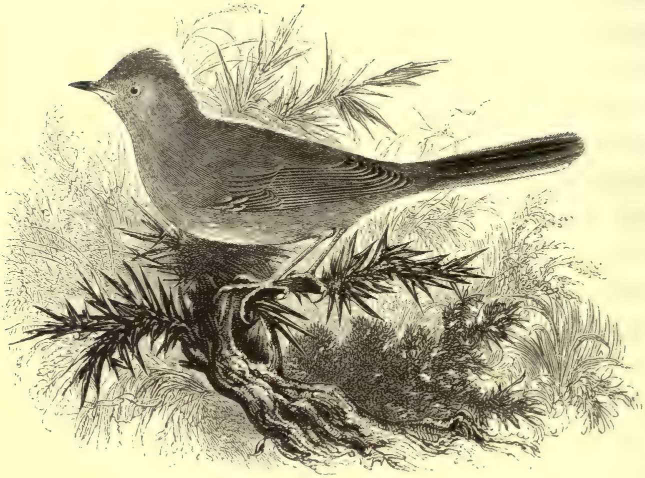
The plumage is similar in the two sexes. Young birds, like the young of the species last described, are more tinted with green and yellow than very adult birds.

It should be borne in mind, that the British Bird to which the term *hippolais* has usually been attached in the works of British Naturalists, is not the *hippolais* of Continental authors; and before quitting this little group, I may here mention that the Hon. and Rev. W. Herbert, in his notes to a recently published edition of White's Natural History of Selborne, has mentioned two other warblers; but as I have never yet been so fortunate as to obtain a specimen of either of them, I only here refer to that gentleman's account. I venture respectfully to request to be allowed an opportunity of examining any British Warbler which may be considered to differ from those figured and described in this History of British Birds.

The vignette below represents the nest of the Dartford Warbler, the bird next to be described.



INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE DARTFORD WARBLER.

Melizophilus Dartfordiensis.

Sylvia	*Dartfordiensis,*	*Dartford*	*Warbler,*	PENN. Brit. Zool. vol. i. p. 530.
Motacilla	*Provincialis,*	„	„	MONTAGU, Ornith. Dict.
„	„	„	„	BEWICK, Brit. Birds, vol. i. p. 239.
Curruca,	„	„	„	FLEM. Brit. An. p. 70.
Melizophilus	„	„	„	SELBY, Brit. Ornith. vol. i. p. 219.
„	„	„	„	JENYNS, Brit. Vert. p. 112.
„	„	„	„	GOULD, Birds of Europe, pt. ix.
Sylvia	„	*Bec-fin Pittechou,*		TEMM. Man. d'Ornith. vol. i. p. 211.

MELIZOPHILUS. *Generic Characters.*—Beak slender, upper mandible slightly bent from the base, and finely emarginated near the tip ; under mandible straight, shorter than the upper, and shutting within it. Nostrils basal, lateral, cleft longitudinally ; base of the beak surrounded with hairs. Wings short : the first quill-feather very small ; the second shorter than either of the next four feathers ; the fourth and fifth the longest in the wing. Tail elongated, cuneiform. Tarsi strong, and longer than the middle toe ; claws of moderate length, sharp.

THE DARTFORD WARBLER appears to have been first made known as a bird inhabiting this country by Dr. Latham, from specimens obtained at Bexley Heath, near Dartford, in April 1773; the occurrence of this novelty was soon after communicated to Pennant, who inserted this species in the edition of his British Zoology, published in 1776.

The generic term *Melizophilus* was applied to this bird by the late Dr. Leach, and first appeared in print in 1816 in a small, thin quarto volume, entitled "A Systematic Catalogue of the Specimens of the Indigenous Mammalia and Birds then preserved in the British Museum," and this generic distinction of the Dartford Warbler has been admitted to some extent in the works of other Naturalists. Since this bird was discovered on Bexley Heath in Kent, it has been found on most of the commons in Kent, Surrey, or Middlesex, which bear old and thick furze. Colonel Montagu found it both in Cornwall and Devonshire, and has detailed at length, both in the Linnean Transactions and in the Supplement to his Ornithological Dictionary, the habits of this bird, more particularly during the spring and summer, which will be hereafter referred to; but so many examples have occurred during winter, that there is no doubt this little hardy warbler remains in this country the whole year. Montagu shot one from the upper branch of a furze bush at a time when the furze was covered with snow; and he saw other specimens on the same occasion. Mr. Rennie, in his Architecture of Birds, page 233, says, "We observed this bird on Blackheath, suspended over the furze, and singing on the wing like a Whitethroat or a Titlark, as early as the end of February 1830; whence we concluded that, notwithstanding the severity of the frost, it had wintered here, as it is known to do in Devonshire." In a paper in the Magazine of Natural History, by Rusticus of Godalming, near which place this bird appears to be plentiful, it is stated, that "its habits are very like those of the little Wren; and when the leaves are off the trees, and the chill winter winds have driven the summer birds to the olive gardens of Spain, or across the Straits, the Furze Wren, as it is there called, is in the height of his enjoyment. I have seen them by dozens skipping about the furze, lighting for a moment on the very point of the sprigs, and instantly diving out of sight again, singing out their angry impatient ditty, for ever the same. Mounted on a tall horse, and riding quietly along the outside, while the fox-hounds have been drawing the furze-fields, I have seen the tops of the furze quite alive with these birds. They prefer those places where the furze is very thick, high, and difficult to get in." During the last winter I have seen two specimens that were killed near Alton in Hampshire; and I knew of another that was shot on Wimbledon Common, where the nest with three young birds has also been obtained. Mr. Gould mentions having obtained specimens at all seasons of the year. These little birds fly with short jerks, and feed principally on small insects, which they capture on the wing, returning to their place on the furze. They are very shy, and though sometimes to be seen on the topmost branches of the brake, they conceal themselves in the thickest part on the least alarm, and creep about from bush to bush. Their note is weak and shrill, but frequently repeated; and sometimes this bird may be observed on the uppermost spray in vocal strain for half an hour afterwards.

In Devonshire, Colonel Montagu says, "The Dartford Warblers were generally found in valleys, within two miles of the sea. Upon a large furze-common near Kingsbridge three pairs of old birds were observed on the 16th of July, two pair of these had young evidently by their extreme clamour, and by frequently appearing with food in their bills."

"On the 17th my researches were renewed; and after watching for three hours the motions of another pair, I discovered the nest with three young; it was placed among the dead branches of the thickest furze, about two feet from the ground, slightly fastened between the main stems, not in a fork. On the same day a pair were observed to be busied, carrying materials for building; and by concealing myself in the bushes, I soon discovered the place of nidification, and, upon examination, found the nest was just begun. As early as the 19th, the nest appeared to be finished; but it possessed only one egg on the 21st, and on the 26th it contained four, when the nest and eggs were secured."

"The nest is composed of dry vegetable stalks, particularly goose-grass, mixed with the tender dead branches of furze, not sufficiently hardened to become prickly; these are put together in a very loose manner, and intermixed very sparingly with wool. In one of the nests was a single Partridge's feather. The lining is equally sparing, for it consists only of a few dry stalks of some fine species of *Carex*, without a single leaf of the plant, and only two or three of the panicles. This thin flimsy structure, which the eye pervades in all parts, much resembles the nest of the Whitethroat. The eggs are also somewhat similar to those of the Whitethroat, but rather less, weighing only twenty-two grains; like the eggs of that species, they possess a slight tinge of green; they are fully speckled all over with olivaceous-brown and cinereous, on a greenish white ground; the markings becoming more dense, and forming a zone at the larger end."

Young males brought up from the nest, Colonel Montagu says, "begin to sing with the appearance of their first mature feathers, and continued in song all the month of October, sometimes with scarcely any intermission for several hours together; the notes are entirely native, consisting of considerable variety, delivered in a hurried manner, and in a much lower tone than I have ever heard the old birds in their natural haunts. This song is different from anything of the kind I ever heard; but in part resembles that of the Stonechat."

Besides the localities already enumerated, the Dartford Warbler has been found in North Devon and, though rarely, in Cornwall, specimens having been obtained at Truro, Falmouth, and Penzance; it has also been taken in Worcestershire; but I have not heard that it has, as yet, been observed in Ireland. In a letter containing notices of the occurrence of rare birds in Leicestershire, with which I have been very lately favoured by Henry Bickley, Esq., of Melton Mowbray, I find that the Dartford Warbler has occurred in that county within the last two years; but this is the most northern locality in which it has been obtained. On the European Continent this bird does not go so high as Germany or Holland. It is found in France; but is most plentiful in Provence, Spain, and Italy. In Provence it is observed to frequent cabbage gardens, whence, probably, its name *Pitte-chou* or *Pit-chou.* In Genoa it remains only from April to September. It has been observed in Sicily and Malta, but is not common.

The beak is slender, and nearly black, particularly towards the point; the edges of the upper mandible, and the base of the lower mandible, reddish yellow: irides reddish; head, cheeks, neck, back, and upper tail-coverts, greyish black; the wing-coverts, wing, and tail-feathers, blackish brown, with rather lighter-coloured edges; the chin chestnut brown, with specks of dull white; throat, breast, and sides, chestnut brown, without spots; the edge of the wing between the carpal joint and the spurious wing-feathers, white; belly white; under surface of the wings, under tail-coverts, and the under surface of the tail-feathers, slate-grey; the tail in shape cuneiform, the outer feathers on each side being three-eighths of an inch shorter than those in the middle, and edged as well as tipped with lighter grey; legs and toes pale reddish brown; claws darker brown.

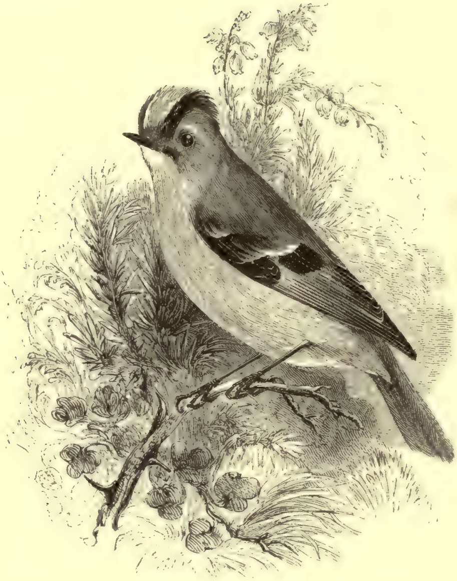
Whole length rather more than five inches, the tail-feathers alone being nearly half the whole length of the bird. The wing very short, from the carpal joint to the end of the longest primary only two inches: the first quill-feather very short; the second equal in length to the seventh; the third equal to the sixth; the fourth and fifth also equal, and the longest in the wing.

Females and young birds are more tinged with brown above, and of a lighter rufous colour beneath. The irides of young birds are yellowish.

By the exertions and perseverance of Mr. Larkham of Roehampton, I am enabled to add in the vignette at page 339, an exact representation of the nest of the Dartford Warbler, which was taken from a specimen obtained on Wimbledon Common during the month of May 1838, after watching the birds for some hours every day for a fortnight.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.



THE GOLDEN CRESTED REGULUS.

Regulus cristatus.

Sylvia Regulus,	*Golden Crested Warbler,*	Penn. Brit. Zool. vol. i. p. 514.
Motacilla „	„ „ *Wren,*	Montagu, Ornith. Dict.
„ „	„ „ „	Bewick, Brit. Birds, vol. i. p. 270.
Regulus cristatus,	„ *Crowned* „	Flem. Brit. An. p. 72.
„ *auricapillus,*	*Gold Crested Regulus,*	Selby, Brit. Ornith. vol. i. p. 229.
„ „	„ „ „	Jenyns, Brit. Vert. p. 113.
„ *vulgaris,*	„ „ *Wren,*	Gould, Birds of Europe, pt. iii.
Sylvia Regulus	*Roitelet ordinaire,*	Temm. Man. d'Ornith. vol. i. p. 229.
Regulus cristatus,	„ „	„ Suppt. ou 3eme pt. p. 157.

Regulus. *Generic Characters.*—Beak slender, straight, the edges dilated at the base, compressed towards the point. Nostrils basal, lateral, oval, partly covered by small feathers directed forwards. Wings of moderate length: the first quill-feather very short; the second shorter than the third; the fourth or fifth the longest in the wing. Legs rather slender; feet with three toes before, one behind; the outer toe joined at its base to the middle toe; claws curved and sharp.

The term *Regulus* proposed for the little Gold Crest by our countryman Ray, has recently been adopted by several Naturalists both on the Continent and in England with generic distinction, and M. Temminck, in the Third Part or Supplement to the Land Birds of his Manual, though not in the Manual itself, has fallen into the views of modern authorities by also admitting and recording this genus, of which six species are now known, three belonging to North America, and three others to Europe.

These little birds exhibit many of the habits of the smaller warblers already described, and also many of the actions of the various species of the genus *Parus*, or Tits, which will be arranged here immediately after them. The little Golden Crested Regulus, or Kinglet, the subject of the present notice, has a soft and pleasing song, somewhat like that of the common Wren. Pennant says he has observed this bird suspended in the air for a considerable time over a bush in flower, whilst it sang very melodiously; but as its voice is not strong, it is necessary to be advantageously placed to hear it in perfection. The call-note of this little bird is like that of the common Creeper. This species is most frequently to be observed in fir plantations, where these diminutive creatures, one of the smallest among our indigenous birds, may be seen, all life and activity, hopping from branch to branch, and clinging to them in various positions, sometimes with their backs downwards, busily engaged seeking various small-winged insects, or their hidden larva, as food, occasionally eating also a few seeds or small berries. They remain in this country all the year through; and are even observed to be more numerous in winter than in summer, many arriving here late in autumn from colder northern regions. Notwithstanding their diminutive size, as well as delicate structure, and without any apparent power of endurance, these birds brave the severity of our rigorous winters, and are among the earliest breeders in spring, the invitation songs of the males being frequently heard by the end of February. The nest is placed under a branch of a fir, and generally towards the end of the bough, being supported by two or three of the laterally diverging and pendant twigs, which are interwoven with the moss of which the outside of the nest is principally composed. The nest thus sheltered by the fir-branch above it, as shown in the vignette at the end, is frequently lined with feathers; and, both for security and architecture, is one of the prettiest examples to be found among our indigenous nest-makers. So confident and bold, also, is the female when sitting on her nest, as to allow very close observation without flying off. She lays from six to ten eggs, of a pale reddish white, six lines long and five lines in diameter. Colonel Montagu, who timed the visits of a female to her nest of eight young ones which he kept in his room, found that she came once in each minute and a half or two minutes, or, upon an average, thirty-six times in an hour; and this continued full sixteen hours in a day. The male would not venture into the room; yet the female would feed her young while the nest was held in the hand. Mr. Selby says, in reference to the early breeding of this species, that he has known the young birds to be fully fledged as early as the third week of April.

The Gold Crest appears to be distributed generally over the whole of the south of England and in Wales, and is mentioned by Mr. Thompson, and others, as common and indigenous to Ireland. In the counties north of London it is also plentiful; and on the eastern coast, at the end of autumn, this species occasionally arrives in flocks. Mr.

Williamson of Scarborough, has observed this on the coast of Yorkshire; and Mr. Selby has recorded that, "on the 24th and 25th of October 1822, after a very severe gale, with thick fog from the north-east, but veering towards its conclusion to the east and south of the east, thousands of these birds were seen to arrive upon the sea-shore and sand-banks of the Northumbrian coast; many of them so fatigued by the length of their flight, or perhaps by the unfavourable shift of wind, as to be unable to rise again from the ground, and great numbers were in consequence caught or destroyed. This flight must have been immense in quantity, as its extent was traced through the whole length of the coasts of Northumberland and Durham. There appears little doubt of this having been a migration from the more northern provinces of Europe, probably furnished by the pine forests of Norway, Sweden, &c., from the circumstance of its arrival being simultaneous with that of large flights of the Woodcock, Fieldfare, and Red-wing. Although I had never before witnessed the actual arrival of the Gold-crested Regulus, I had long felt convinced, from the great and sudden increase of the species during the autumnal and hyemal months, that our indigenous birds must be augmented by a body of strangers making these shores their winter's resort."

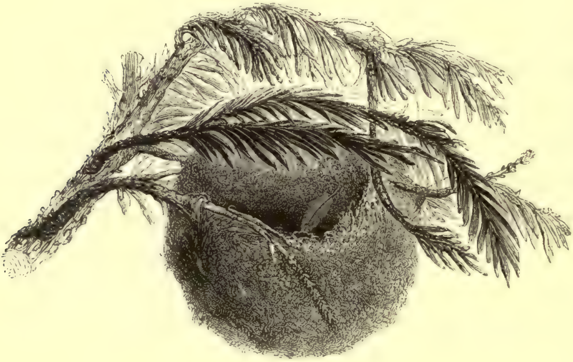
Mr. Macgillivray mentions this species as inhabiting Scotland, and the Rev. Mr. Low and Mr. Dunn include it in their accounts of the Birds of Shetland and Orkney; it inhabits also Denmark, Norway, Sweden, part of Russia and Siberia; but many of them, as indicated by the autumnal flights referred to, leave the more northern parts of these countries for the winter, and spread themselves over the temperate portions to the southward, even to the shores of the Mediterranean. It is found in Sicily and

Malta. The Zoological Society have received specimens from Trebizond; Edwards considered it an inhabitant of various parts of Asia; and M. Temminck includes it in his Catalogue of the Birds of Japan.

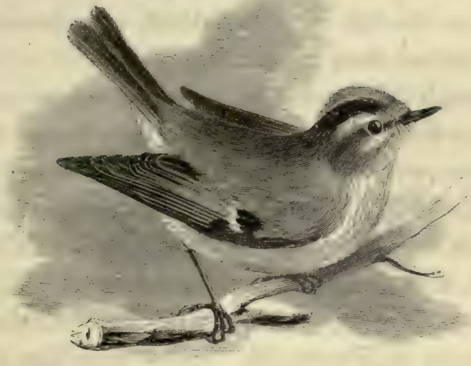
The beak of the male is black; the irides hazel; the forehead greyish white; the base of the crest on each side is bounded by a narrow black line; the crest feathers bright yellow, tipped with orange; sides of the head, nape, back, and upper tail-coverts, olive green, slightly tinged with yellow; the smaller wing-coverts tipped with white; coverts of the primaries black; those of the secondaries tipped with white, overlying a black spot on the base of the secondaries and tertials; wing and tail-feathers brownish black, edged with greenish yellow; all the under parts yellowish grey; legs, toes, and claws, brown.

The whole length about three inches and a half. From the carpus to the end of the longest primary, two inches: the first quill-feather very short; the second shorter than either of the next four; the fifth the longest in the wing.

In the female, the plumage generally is less bright in colour, and the crest is lemon-yellow.



INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



THE FIRE-CRESTED REGULUS.

Regulus ignicapillus.

Regulus ignicapillus,	*Fire-crested Regulus,*	Jenyns, Brit Vert. p. 113.
„ „	„ „ *Wren,*	Eyton, Rarer Brit. Birds, p. 13.
„ „	„ „ „	Gould, Birds of Europe, pt. iii.
Sylvia ignicapilla,	*Roitelet triple bandeau,*	Temm. Man. d'Ornith. vol. i. p. 231.
Regulus ignicapillus,	„ „ „	Temm. Suppt. p. 158.

The Fire-crested Regulus was first made known as an inhabitant of this country by my friend the Rev. Leonard Jenyns, who obtained a specimen in his own garden at Swaffham Bulbeck, near Cambridge, in August 1832, and this, being a young bird of the year, had probably been reared in that neighbourhood. Since then others have been observed at Brighton by Mr. J. E. Gray. In the Magazine of Zoology and Botany, one specimen is said to have been obtained near Durham, and another was caught on the rigging of a ship five miles off the coast of Norfolk in the early part of October 1836. Since that period the Fire-crested Regulus is recorded to have been taken in Kent; W. R. Fisher, Esq., has obtained one in Norfolk, and E. H. Rodd, Esq, of Penzance, sent me notice on the 8th of March 1845, of a female that had been obtained there on that day.

Although this species is not anywhere so numerous as the little Gold Crest, the general resemblance in the two birds has probably caused the rarer one to be occasionally overlooked. M. Temminck says it is common in large forests in Germany, and M. Brehm, a naturalist of that country, says that it comes there in March and April, and leaves again in September and October. Of the habits of this species in France, M. Vieillot says that its voice is stronger than that of the Gold Crest, and that pairs of them only are usually seen together; but that the time of their passage in France, as compared with that of the Gold Crest, is later in the spring, and earlier in the autumn. A nest of this bird, found by M. Vieillot near Rouen, was suspended under a branch of a tree, like that of its generic companion, and contained five eggs. According to other authors, this bird sometimes lays as many as ten eggs, of a pale flesh colour, marked with small red spots at the larger end. The food is said to be similar to that of the preceding species. It is occasionally seen in France during winter. It has been noticed in Sicily, Malta, and Algeria.

I am indebted to Mr. J. D. Hoy for the following notes of the habits of this species, as observed by himself on the Continent, and I insert them with the greater pleasure, because they will assist observers in further identifying the species in this country.

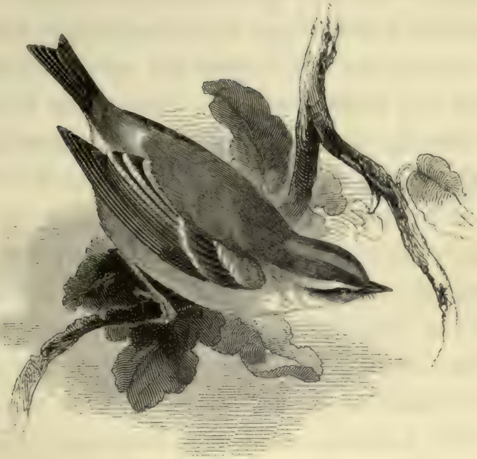
" M. Temminck describes the *Regulus ignicapillus* as common in the Belgian provinces; but in the parts which I have visited, I have found it only as a migratory species during the autumn; it probably passes over the same districts in the spring, but I have not observed it. As M. Brehm, the German naturalist, seems to have been one of the first who noticed this bird, I have little doubt of its breeding in northern Germany. I fully expected to have found it in some very extensive tracts of forest which I visited last summer, situated between the Meuse and the Rhine; but I could neither meet with this species, nor our common Gold Crest. I have noticed the appearance of the Fire Crest in the beginning of September, at first only single birds or in pairs; the end of September, and the first fortnight in October, seem to be the time when they pass over in the greatest numbers. I never recollect having seen more than five or six individuals together, whereas with the common species you often find them in parties of a dozen or more. By the early part of November you will rarely find the Fire Crest, while the common species is abundant through the winter. I have never heard the song of the Fire Crest, but have no doubt of its differing from the other; the call-note I can readily distinguish among a host of the common; it is shorter, not so shrill, and pitched in a different key, that to one well versed in the language of birds it is easily discovered. I think they prefer low brushwood and young plantations of fir to the loftier trees; but yet I have often found them in the latter situations. They associate with the Titmice like the other kind; but I have found them sometimes more restless and shy. I have no doubt but the Fire Crest would be found early in autumn if diligently sought for on our south-eastern coast by those well conversant with its notes, without which knowledge it would be difficult to find it; when within a few yards of it this bird is readily distinguished by the white mark above the eyes."

The beak is black, and rather stouter at the base than that of the Gold Crest; the irides hazel; on the cheek above the eye, and also below it, a greyish white streak; at the base of the crest on each side a black streak; from the angle of the beak to the eye, and over the ear-coverts, a second black streak; and from the lower mandible, passing downwards and backwards, a third black streak, producing three dark lines contrasted with the two light-coloured lines on the sides of the head, and hence the French name "*triple bandeau;*" the forehead greyish white, tinged with red; the crest large, and of a much more vivid reddish colour than that of the same parts in the Gold Crest; the nape, back, and upper tail-coverts, olive-green, but with less of the brown and more of the yellow than in the other species, particularly on the sides of the neck; great coverts of the primaries tipped with white; base of the secondaries black; wing and tail-feathers brownish black, edged with green; the tail-feathers longer than those of the Gold Crest; all the under parts greyish white; legs, toes, and claws, brown.

Whole length near four inches. From the carpus to the end of the primaries, two inches; the first quill very short; the second shorter than the third; the fourth and fifth nearly equal, and the longest in the wing.

The young of the year are stated by Mr. Jenyns, "to be distinguished from those of the last species by the longer and broader bill; cheeks cinereous, without any appearance of the longitudinal streaks; crest of a pale lemon yellow, scarcely developed; forehead and sides of the neck, cinereous; upper parts not so bright as in the adult; under parts cinereous, tinged with yellow.

INSESSORES. *SYLVIADÆ.*
DENTIROSTRES.



DALMATIAN REGULUS.

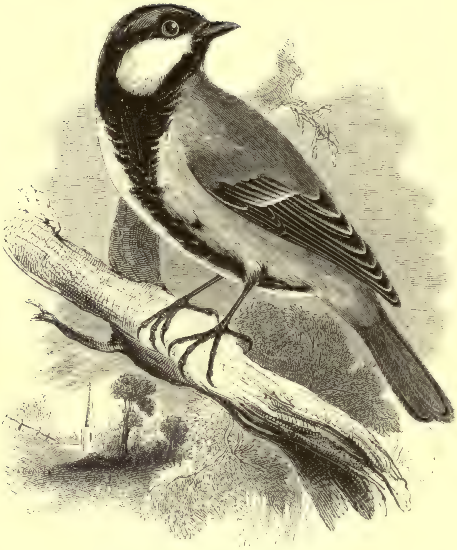
Regulus modestus.

Regulus modestus,	*Dalmatian Regulus*,	Gould, Birds of Europe, pt. xii.
Phylloscopus ,,	,, ,,	Blyth, Ann. Nat. Hist. v. xiii, p. 179.
Regulus ,,	*Roitelet modeste*,	Temm. Man. d'Ornith, vol. iv. p. 618.

A single specimen of this bird, shot in Dalmatia in 1829, by the Baron de Feldegg, of Frankfort, was figured by Mr. Gould in his Birds of Europe, as above quoted. Another, shot in Northumberland, was recorded in the second volume of the Annals of Natural History, page 310, by Mr. John Hancock, of Newcastle-upon-Tyne, as follows :—" I beg to hand you a notice of a very scarce and interesting species of *Regulus*, which I shot on the banks near Hartley, on the coast of Northumberland, on the 26th of last September, (1838); it corresponds exactly with Mr. Gould's *Regulus modestus*, a species so extremely rare, that he considers the individual from which he described as unique in the continental collections. The description of my bird, which will now entitle this species to a place in the British Fauna, is as follows:—Length $4\frac{1}{16}$ inches: breadth $6\frac{1}{2}$ inches: length from the carpus to the end of the wing $2\frac{1}{16}$ inches; tail $1\frac{1}{16}$ inches; the bill from the gape to the tip nearly $\frac{7}{16}$; and from the tips of the feathers, which extend to the extremity of the nostrils, a quarter of an inch. The whole of the upper plumage a greenish yellow; on the centre of the crown of the head is a streak of paler: a light lemon-coloured streak extends over the eye from the base of the bill to the occiput; a short streak of the same colour passes beneath the eye, and a narrow band of dusky passes through the eye, and reaches the termination of the auriculars. The under-parts pale yellow; the ridge of the wing bright lemon colour; wing feathers dusky, edged with pale yellow, becoming broader on the secondaries; two conspicuous bands of lemon colour across the coverts; the wings reach to within three quarters of an inch of the end of the tail. Bill brown, with the under mandible paler at the base; mouth yellow; legs and toes brown, with the under surface of the toes inclining to yellow; claws brown. Its manners, as far as I had an opportunity of examining them, were so like those of the Golden-crested Wren, that at first I mistook it for that species. It was continually in motion, flitting from place to place in search of insects on umbelliferous plants, and such other herbage as the bleak banks of the Northumberland coast affords; such a situation could not be at all suited to the habits of this species, and there can be little doubt that it had arrived at the coast previous to, or immediately after, its autumnal migrations."

Mr. Hancock has stated to Mr. Selby, that the covering of the nostrils in his specimen consists of various feathers, and not of a single plumulet as in the other *Reguli*. On this account Mr. Blyth, who has found the Dalmatian Regulus in the vicinity of Calcutta, and sent two specimens to the British Museum, has proposed for it the new generic term *Phylloscopus*. B. H. Hodgson, Esq., includes this species in his catalogue of the Birds of Nepal.

INSESSORES. *PARIDÆ.*
DENTIROSTRES.



THE GREAT TIT.

Parus major.

Parus major,	*The Great Titmouse,*	PENN. Brit. Zool. vol. i. p. 532.
„ „	„ „	MONTAGU, Ornith. Dict.
„ „	„ „	BEWICK, Brit. Birds, vol. i. p. 282.
„ „	„ „	FLEM. Brit. An. p. 80.
„ „	„ „	SELBY, Brit. Ornith. vol. i. p. 233.
„ „	„ „	JENYNS, Brit. Vert. p. 121.
„ „	*The Great Tit,*	GOULD, Birds of Europe, pt. viii.
„ „	*Mésange Charbonniere*	TEMM. Man d'Ornith. vol. i. p. 287.

PARUS. *Generic Characters.*—Beak strong, short, rather conical, slightly compressed, sharp-pointed, and hard. Nostrils basal, round, covered with reflected bristly feathers. Wings—the first quill-feather very short; the second not so long as the third; the fourth or fifth the longest. Feet with three toes before and one behind; the anterior toes divided to their origin; the hind toe strong, and armed with a long, hooked claw.

Some of the various species of the genus *Parus*, or the Titmice, as they have been very generally called, are remarkable for the beauty of the colours of their plumage, and the well-defined character of the markings; these birds also attract attention from their vivacity and incessant activity. They are indefatigable in their search for food; and being fearless in disposition, may be readily observed climbing the trunks of trees, or by the aid of their strong toes, and hooked claws hanging suspended from the under surface of branches, while examining every cavity, leaf, or bud, that is likely to afford shelter to any of their numerous insect prey. These birds exhibit several peculiarities common to different groups of the dentirostral division. The Great Tit, so called, and placed first in the series, because the largest in size, will frequently kill small birds, accomplishing his purpose by repeated blows of his hard and sharp beak on the skull of the victim, and afterwards picking out and eating the brains. Though more truly a feeder on insects, the Great Tit, unlike insectivorous birds in general, does not migrate, but remains all the year in the same district, apparently unaffected by the very different temperature of Italy as compared with Russia, and the species is known to be constantly resident in both countries.

In England the Great Tit is seldom seen on bleak open ground, but inhabits woods, the vicinity of gardens, or other enclosed and sheltered situations in summer, where it occasionally feeds on small seeds. In winter it approaches nearer the habitations of men, and may be seen in hard weather closely examining the thatch of old buildings in search of the many small flies that harbour there. As the Great Tit is an early breeder, the lively chirping notes of the male are heard early in February; sometimes this bird produces a sound which has been considered to resemble the noise made in sharpening a saw; and though this is small praise, his notes are more remarkable for vivacity and frequent repetition, than for quality of tone. The nest, formed of moss and lined with hair and feathers, is usually placed in a hollow of a tree or a hole in a wall. The deserted nest of a Crow or a Magpie is sometimes chosen. Several observers have recorded the partiality so frequently evinced by this species to build its nest in or about any old unused wooden pump, and the mass of materials collected on such occasions wherewith to construct it. The eggs are from six to nine in number, nine lines and a half in length, and seven lines in breadth; white, spotted and speckled with pale red.

This bird is common throughout the enclosed parts of most of the counties of England and Wales; Mr. Thompson informs me it is indigenous to Ireland; and Mr. Macgillivray mentions it as a native of Scotland. It inhabits Denmark, Norway, Sweden, Russia, and Siberia, even in winter. From thence southwards this species inhabits the whole of the European continent. The powers of flight of this bird are much greater than from its appearance would be expected. The Rev. Edward Stanley, Bishop of Norwich, in his "Familiar History of Birds," quotes from Forster's "North America," vol. i., an instance of the Great Tit having been met in latitude 40° north, and longitude 48° west, more than half way across the Atlantic, in a direct line from the Azores to Philadelphia.

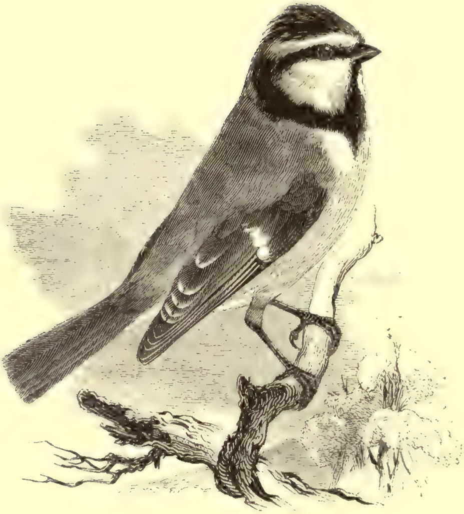
The Great Tit inhabits Sicily and Crete; was obtained by Mr. Strickland at Smyrna; and specimens have been received by the Zoological Society from Trebizond. M. Temmick includes this species in his Catalogue of the Birds of Japan.

The beak is black ; the irides dusky brown ; the top of the head black, with a spot of white at the nape of the neck; the cheeks and ear-coverts white; the back, shoulders, and coverts of the tertials, greenish ash ; upper tail-coverts bluish grey ; lesser wing-coverts greyish blue ; greater wing-coverts bluish black, broadly tipped with white, forming a conspicuous bar across the wings ; quill-feathers bluish black, edged with bluish white, which is broadest on the tertials ; tail-feathers bluish black, darkest on the inner web ; the outer tail-feather on each side dull white on the outer web, and on part of the inner web towards the end of the feather ; the chin and throat black, and united to the black colour on the sides of the nape, encircling the white ear-coverts and cheeks ; breasts, sides, and flanks, dull sulphur-yellow ; from the chest to the vent a black stripe passes along the mesial line ; under wing-coverts dull greyish white ; under surface of the wing and tail-feathers lead grey ; under tail-coverts white ; legs, toes, and claws, lead colour.

The whole length of this species rather less than six inches. From the carpal joint to the end of the longest quill-feather, two inches and seven-eighths : the first quill-feather very short ; the second not so long as the third ; the fourth a little longer than the fifth, and the longest in the wing.

The female does not differ much from the male ; the plumage, however, is not so brilliant in colour, and the black line down the breast and belly is not so broad as in the male, nor does it extend so far towards the vent.

INSESSORES. *PARIDÆ.*
DENTIROSTRES.



THE BLUE TIT.

Parus cæruleus.

Parus	*cæruleus,*	*Blue*	*Titmouse,*	Penn. Brit. Zool. vol. i. p. 534.
,,	,,	,,	,,	Montagu, Ornith. Dict.
,,	,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 286.
,,	,,	,,	,,	Flem. Brit. An. p. 80.
,,	,,	,,	,,	Selby, Brit. Ornith. vol i. p. 235.
,,	,,	,,	,,	Jenyns, Brit. Vert. p. 122.
,,	,,	,,	,,	Gould, Birds of Europe, pt. xiv.
,,	,,	*Mésange bleue,*		Temm. Man. d'Ornith. vol. i. p. 289.

The Blue Tit, like the species last described, is very generally distributed in this country, and although a very pretty bird, both as to colour and markings, as well as active and lively, it is but little noticed, and not at all appreciated, probably only because it is exceedingly common. It frequents small woods, orchards, and gardens; and is said to do injury to fruit trees when searching for food, by destroying the fruit buds as well as the insects. Several experienced observers, however, believe that this bird does more good than harm. Mr. Selby says, "I am convinced that the trifling injury occasionally committed by the abrasion of a few flower buds is more than compensated by the destruction of innumerable larvæ and eggs of the insect tribe, which are usually deposited in or about those essential parts of fructification; and which, if allowed to proceed through the necessary changes, would effectually check all hope of produce." Other evidence will be adduced.

The Blue Tit builds in a hole in a wall or a tree; the nest is made up of a profusion of moss, hair, and feathers; the eggs are variable in number, sometimes very numerous. Montagu mentions six or seven; Pennant names from twelve to fourteen; Mr. Heysham has also found fourteen eggs in a nest; and Mr. Hewitson has recorded one instance in which the nest contained eighteen eggs. From eight to ten eggs, however, is the more common number; they are white, spotted with pale red, measuring seven lines and a half in length, and six lines in diameter.

When the Blue Tit has taken possession of a hole in a wall, or in a decayed tree, she is not easily induced to quit it, but defends her nest and eggs with great courage and perseverance, puffing out her feathers, hissing like an angry kitten, and goes by the name of Billy Biter among the bird-nesting boys of several counties, from a vivid recollection of certain impressions made on their fingers. A female that had taken possession of a small wooden box hung up against an outbuilding, into which she had carried abundance of materials for her nest, and in the midst of which she was then sitting upon her numerous eggs, allowed herself to be carried in the box into a house for examination, and when the box was replaced in its former situation, she did not desert her eggs, but hatched them, and reared her young. The Blue Tit sits "about fourteen days. When first hatched," says a correspondent in the Magazine of Natural History, "the hen sat upon the young ones several hours during the day. This time was gradually shortened, till they were sufficiently fledged not to need such a means of warmth. Nothing but small grubs and caterpillars were brought to the nest; and I was induced to believe that the depredations of these birds are not, at that time of the year, injurious to vegetation. Many insects did they bring from some apple trees that grew near, but no buds." In another instance where the parent birds were closely watched, caterpillars only were brought, in rapid succession, to feed their young.

Insects, in their various stages, appear to be the principal objects of search as food during summer. In winter the Blue Tits frequent farmyards and out-houses, picking up small seeds, or other portions of vegetable matter, and are constant visitors to the horse flesh hung up near the dog-kennel. They are most amusing when seen upon trees, from their unceasing restlessness, and the grotesque positions assumed under as well as over the branches when searching for food. The call-note is a single shrill chirp, and the best vocal efforts of this little bird possess but little variation.

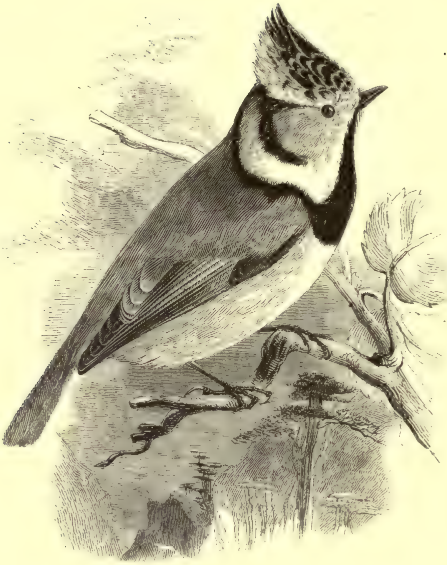
The general distribution of the Blue Tit in this country renders a particular notice of its localities unnecessary. It appears to be common in Ireland; and was seen by Mr. Selby as far north in Scotland as the fir plantations at Rosehall in Sutherlandshire. It is a native of Denmark, Norway, Sweden, the southern part of Russia, and the

European Continent. M. Vieillot says it inhabits the Canary Islands; it is found in Sicily and in Crete. M. Temminck, in his Supplement, says that it is found in the Morea, and includes it also in his Catalogue of the Birds of Japan.

The male has the beak of a dusky horn colour, almost black; the forehead bluish white, the white extending backwards in a band over the eyes; the crown of the head azure blue; from the nostril to the eye, and from thence over the ear-coverts to the nape of the neck, a stripe of Prussian blue; the irides dark hazel; above the eye, and under the blue colour of the crown of the head, is a white band, already noticed, which isolating the blue colour above it, has given rise to the term Blue-cap, another name by which this bird is known; the cheeks are white; the nape of the neck has a band of Prussian blue, which passing forward on each side, under the white cheeks, joins a triangular patch of blackish blue colour which descends from the chin over the throat; the back and upper tail-coverts yellowish green; wings and tail pale blue; the greater wing-coverts and the tertials with a white spot at the tip of each; under surface of the body sulphur yellow, with a central longitudinal patch of dark blue; under surface of the wing and tail-feathers pearl grey; legs, toes, and claws, bluish black.

The whole length of the bird four inches and a half. From the carpal joint to the end of the wing, two inches and three-eighths; the first quill-feather not quite half as long as the second; the third longer than the second; the fourth the longest in the wing.

INSESSORES. *PARIDÆ.*
DENTIROSTRES.



THE CRESTED TIT.

Parus cristatus.

Parus	*cristatus,*	*Crested*	*Titmouse,*	Penn. Brit. Zool. vol. i. p. 542.
"	"	"	"	Montagu, Ornith. Dict.
"	"	"	"	Bewick, Brit. Birds, vol. i. p. 284.
"	"	"	"	Flem. Brit. An. p. 81.
"	"	"	"	Selby, Brit. Ornith. vol. i. p. 243.
"	"	"	"	Jenyns, Brit. Vert. p. 122.
"	"	"	"	Gould, Birds of Europe, pt. ix.
"	"	*Mésange huppée,*		Temm. Man. d'Ornith. vol. i. p. 290.

The Crested Tit appears to be as rare as a British Bird as the two species of Tits already described are common, and the authorities for its capture are but few. John Walcott, Esq. in the second volume of his Synopsis of British Birds, published in 1789, says, "this bird has been lately observed in Scotland, once in a considerable flock." Dr. Latham, in the second Supplementary volume to his General Synopsis, says, "We have heard of this species being plentiful in some parts of Scotland, especially in the pine forests, from whence I have received a specimen, now in my possession." Colonel Montagu, in his Ornithological Dictionary, says, "it is not uncommon amongst the large tracts of pines in the north of Scotland, particularly in the forest of Glenmoor, the property of the Duke of Gordon, from whence we have seen it." In a note to the history of this species in the British Ornithology of Mr. Selby, it is stated, "Sir William Jardine informs me that this bird has been found in some plantations not far distant from Glasgow, where it annually breeds." Thomas Macpherson Grant, Esq. of Edinburgh, who has favoured me with notes of his own observations on birds in the eastern counties of Scotland, says, "I possess one preserved specimen of the Crested Tit, shot by myself, and seen in considerable numbers;" and F. W. Bigge, Esq. of Hampton Court, whose name I have quoted in the article on White's Thrush, at page 193, informs me that in the summer of 1837, he observed several examples of this species in the pass of Killiecrankie.

The Crested Tit inhabits Denmark, Sweden, and the more temperate parts of Russia. M. Nilsson, the Swedish naturalist, says it remains in that country all the year, inhabiting the pine forests, building in holes in trees, and feeding on insects in their different stages, and on the small seeds of various evergreens. It inhabits the forests of Germany, and the fir-covered mountains of Switzerland; it is also found in Lorraine and Provence. Bechstein says it inhabits all the pine woods of Thuringia; and Mr. Hoy, who has had opportunities of observing this species on the Continent, informs me that their note has some resemblance to that of the Cole Tit, but a peculiar shake at the finish enables you to distinguish it among others of the tribe; its simple call-note is also somewhat different. They seem partial to woods where fir and oak trees are mixed, the holes in the oaks generally serving them for their nests. The female lays eight or ten white eggs, with a few spots and specks of pale red; the length of the egg seven lines, and six lines in breadth.

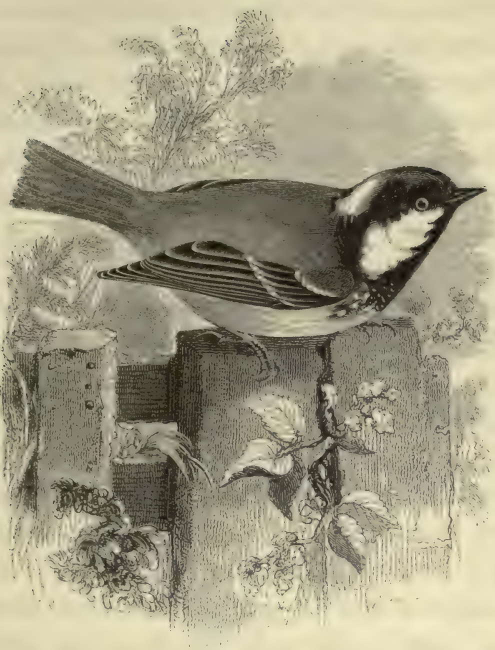
The adult male has the beak nearly black; the irides hazel; the cheeks white, spotted with black; the forehead black and white; the elongated feathers on the top of the head, which form the conical crest, are black at the base broadly margined with white; from the eye, passing over the ear-coverts, is a black streak, which joins a circular band of the same colour curving forwards below the ear-coverts; behind this is a patch of white bounded by another black band curving forward towards the side of the neck: the back, wing, and tail-coverts, hair-brown; quill and tail-feathers rather darker; chin and throat covered with a black triangular patch of large size, which descends to the upper part of the breast; all the under surface of the body below the black is of a whitish fawn colour; under surface of the wing and tail-feathers pearl grey; legs, toes, and claws, lead colour.

The whole length of the bird is four inches and a half. From the carpal joint to the end of the wing, two inches and a half: the first quill-feather less than half the length of the second; the third and fifth feathers equal in length, and longer than the second; the fourth the longest feather in the wing.

The female has the black patch on the throat of smaller size than that of the male.

INSESSORES.
DENTIROSTRES.

PARIDÆ.



THE COLE TIT.

Parus ater.

Parus ater,	*Cole Titmouse,*	PENN. Brit. Zool. vol. i. p. 535.
,, ,,	,, ,,	MONTAGU, Ornith. Dict.
,, ,,	,, ,,	BEWICK, Brit. Birds, vol. i. p. 288.
,, ,,	*Colemouse*	FLEM. Brit. An. p. 80.
,, ,,	*Cole Titmouse,*	SELBY, Brit. Ornith. vol. i. p. 239.
,, ,,	,, ,,	JENYNS, Man. Brit. Vert. p. 123.
,, ,,	,, *Tit,*	GOULD, Birds of Europe, pt. xi.
,, ,,	*Mésange petite charbonnière,*	TEMM. Man. d'Ornith. vol. i. p. 288.

THE COLE TIT appears to be almost as generally distributed in this country as either the Great or the Blue Tit, already described, and inhabits woods, plantations, and shrubberies, particularly those containing the various firs, the birch, or the oak. Like the Blue Tit also, this species is constantly in motion, sometimes associated with Gold Crests, and Lesser Redpoles, forming a small flock, and roving from tree to tree in active search for those small insects, and the seeds of various evergreens, upon which they principally subsist. They appear to bear cold weather with indifference; and are resident all the year, not only in this country and in Scotland, but even in higher northern latitudes.

The note of this bird is generally harsh, with frequent repetition, but it sometimes assumes a more agreeable tone. The nest is built of moss and wool, lined with hair, placed in a hole of a wall or a tree, in a cavity of a decayed stump, and occasionally on the ground at the mouth of the hole of some burrowing animal. Mr. Hewitson says, that when the Cole Tit "breeds in the holes of trees it is usually at a less elevation than the other species, and sometimes even in cavities which occur amongst the exposed roots." The eggs are from six to eight in number, rather smaller in size than those of the Blue or Marsh Tit, but like the eggs of all the species of this genus, in colour they are white, spotted with pale red, measuring seven lines in length, by five lines and a half in breadth.

The Cole Tit, according to Mr. Thompson, is generally distributed over Ireland. Mr. Macgillivray includes it among the birds of Scotland. Mr. W. Christie saw it in Norway. M. Nilsson says it is resident in Sweden; and Pennant, in his Arctic Zoology, states that it inhabits Siberia, and passes the winter even beyond the Lena. It is not less generally spread over the European continent; and according to the Prince of Musignano, it is a constant resident as far south as Italy, and a few are seen in

Sicily. M. Temminck includes it in his Catalogue of the Birds of Japan.

The adult male has the beak black; the irides hazel; the cheeks, side of the neck, and a descending stripe on the nape of the neck, white; the head, ear-coverts, and the lower part of the side of the neck before the wing, black; back and wing-coverts bluish grey; the smaller and larger coverts ending with a spot of white on each feather, forming two conspicuous white bars across the wings; the quill-feathers brownish grey, edged with green; the tertials tipped with dull white; upper tail-coverts greenish fawn colour; tail-feathers, like those of the wings, brownish grey; the tail slightly forked. The chin and throat black; breast dull white; belly, flanks, and under tail-coverts, fawn-colour, tinged with green; under surface of wing and tail-feathers grey; legs, toes, and claws, black.

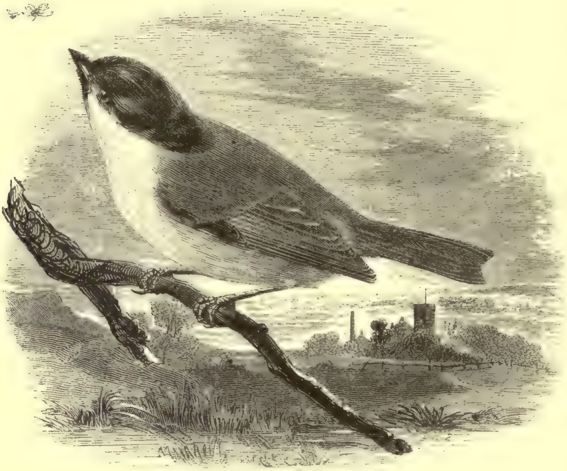
This bird is at once distinguished from the Marsh Tit, next to be described, by the white patch on the nape of the neck, and by the white spots on the wing-coverts, which are always present, neither of which are to be found in the Marsh Tit at any age.

The whole length of the Cole Tit is four inches and a quarter. From the carpal joint to the end of the wing two inches and three-eighths: the first feather very short; the second shorter than the third, and equal to the seventh; the third, fourth, and fifth, nearly equal to each other in length, and the longest in the wing.

Females and young birds, have the grey colour of the back tinged with greenish brown; in young birds, also, the white colour is not so pure, and the black colour about the head is less decided.

INSESSORES.
DENTIROSTRES.

PARIDÆ.



THE MARSH TIT.

Parus palustris.

Parus palustris,	*Marsh Titmouse,*	PENN. Brit. Zool. vol. i. p. 536.
,, ,,	,, ,,	MONTAGU, Ornith. Dict.
,, ,,	,, ,,	BEWICK, Brit. Birds, vol. i. p. 292.
,, ,,	,, ,,	FLEM. Brit. An. p. 80.
,, ,,	,, ,,	SELBY, Brit. Ornith. vol. i. p. 237.
,, ,,	,, ,,	JENYNS, Brit. Vert. p. 123.
,, ,,	,, ,,	GOULD, Birds of Europe, pt. xi.
,, ,,	*Mésange nonnette,*	TEMM. Man. d'Ornith, vol. i. p. 291.

THE MARSH TIT, if not so generally distributed as some others of the family, is yet plentiful as a species in many localities; but, as its name implies, is more partial than the other Tits described to low tracts of land covered with thickets, to marshes, and moist meadows, bearing old willow trees and alders, and to swampy ground near woods, but apparently preferring shorter brushwood to high trees, occasionally visiting orchards and gardens. The Marsh Tit, also, like its generic companions, remains in this country throughout the year; is, like them, active and sprightly in its habits, flitting from place to place, feeding on insects in their various stages, is said to be an enemy to bees, and when in the garden, may be frequently seen feeding on the seeds of the sunflower; is observed, also, to be partial to the seeds of the thistle; and in winter, according to Mr. Selby, it will eat stale flesh.

This bird makes its nest in holes in old willows, and in the low scrubby stocks of pollard trees that have been headed down, taking considerable pains in enlarging any suitable cavity. Colonel Montagu says he has seen the Marsh Tit excavating the decayed part of such trees, and artfully carrying the chips in its bill to some distance, always working downwards, and making the bottom for the reception of the nest larger than the entrance. The nest is compactly formed of moss and wool, lined with the soft seed-down of the willow. The eggs are from five to eight in number, measuring seven lines and a half in length, by six lines in breadth, white, spotted with red. The female exhibits great attachment to her nest, and is not easily induced to forsake it. The call-note of this species is a single sharp chirp, like that of the other Tits, and this bird is only to be distinguished from them by its voice, when it puts forth a rapid succession of notes, more remarkable for chattering gaiety than quality of tone.

The Great Tit, the Blue, the Cole, the Marsh, and the Long-tailed Tit, next to be described, are each of them common around London; and when requiring additional specimens for my use in this work, I found no difficulty in obtaining pairs of each of them within a very short space of time. A young ornithological friend of mine has given me a list of birds observed by himself in Kensington Gardens, including near seventy species; an unusually large number for so limited a locality in such a situation. The five species of Tits, just referred to, are included in this list; these birds are probably attracted to this spot by the insect food to be found about old trees in various stages of decay, a London atmosphere being unfavourable to healthy vegetation.

From London westward, the Marsh Tit may be traced, to Cornwall and Wales. In Ireland, according to Mr. Thompson, this bird has been killed in the Phœnix Park, near Dublin; in the county of Kildare; in the vicinity of Belfast, and in the county of Donegal. From London northward, it may be traced through Essex, Suffolk, Norfolk, and Lincolnshire. I have been favoured with a Catalogue of the Birds of Derbyshire and Yorkshire, by Mr. Neville Wood, and the Rev. Orpen Morris, and these sources of information have been frequently quoted: from the first I learn, in the present instance, that the Marsh Tit is abundant in Derbyshire, and from the second, that it is also common in Yorkshire. Mr. Selby includes it in his Catalogue of the Birds of Durham and Northumberland; and Mr. Macgillivray has noticed it near Edinburgh. From the works of Muller, Brunnich, and M. Nilsson, this bird appears to be resident in Denmark, Norway, and Sweden, and remains even in Russia and Siberia all the year. It is dispersed over the European continent; and, as might be expected, is more abundant in Holland than elsewhere. It is resident also all the year as far south as Provence, Italy, and Sicily; but is not very common.

The Marsh Tit is immediately distinguished from the

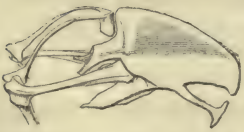
Cole Tit by having no white patch on the nape of the neck, nor any white spots on either row of the wing-coverts.

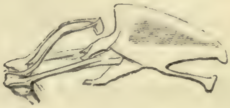
The beak is black; the irides dark hazel; the forehead, crown, and nape, deep black; the back, wing-coverts, and upper tail-coverts, ash brown tinged with green; wing and tail-feathers greyish brown, with the edges rather lighter in colour; the tail even at the end; the chin black; the cheeks, throat, and breast, dull greyish white; flanks, belly, and under tail-coverts, tinged with light brown; under surface of wing and tail-feathers grey; legs, toes, and claws, bluish black.

The whole length of the bird four inches and a half. From the carpal joint to the end of the wing-primaries two inches and three-eighths: the first quill-feather very short; the second equal in length to the ninth; the third equal to the seventh; the fourth, fifth, and sixth, nearly equal, and the longest in the wing.

The sexes do not differ in plumage.

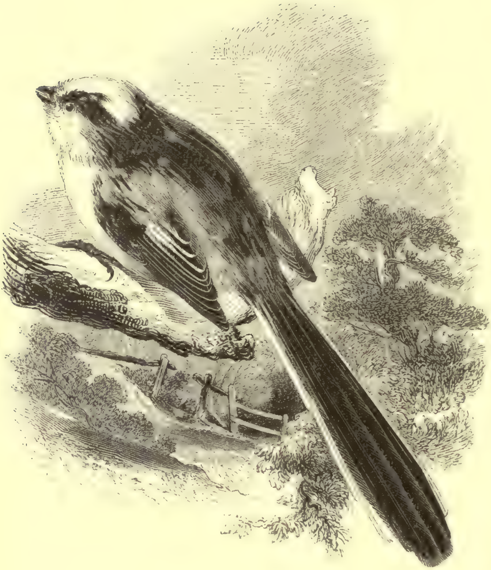
The vignette below represents, on the left hand, the breast-bone of the Nightingale; and on the right, the same part in the Great Tit, as illustrative of the form of the sternum in the genera *Philomela* and *Parus*.





INSESSORES.
DENTIROSTRES.

PARIDÆ.



THE LONG-TAILED TIT.

Parus caudatus.

Parus	*caudatus,*	*Long-tailed*	*Titmouse,*	Penn. Brit. Zool. vol. i. p. 537.
,,	,,	,,	,,	Montagu, Ornith. Dict.
,,	,,	,,	,,	Bewick, Brit. Birds, vol. i. p. 289.
,,	,,	,,	,,	Flem. Brit. An. p. 81.
,,	,,	,,	,,	Selby, Brit. Ornith. vol. i. p. 241.
,,	,,	,,	,,	Jenyns, Brit. Vert. p. 124.
,,	,,	,,	*Tit,*	Gould, Birds of Europe, pt. viii.
,,	,,	*Mésange à longue queue,*		Temm. Man. d'Ornith. vol. i. p. 266.

The Long-tailed Tit was removed from the genus *Parus* by Dr. Leach in the printed Catalogue published in 1816, which has been already referred to in the article on the Dartford Warbler, at page 312, and the name *Mecis-*

tura vagans applied to it. It is to be regretted that the generic characters, and the reasons which induced so excellent a zoologist to make the separation in this instance, as well as in many others, at least as far I am aware, were never published. Other naturalists appear to coincide with Dr. Leach in the propriety of this division. M. Brehm, in his work on the Birds of Germany, published in 1831, considers the Long-tailed Tit entitled to generic distinction, and has used the term *Paroides* for it, apparently unaware of the name previously given by Dr. Leach. The Prince of Musignano, also, in his recently published "Comparative List of the Birds of Europe and North America," adopts for the Long-tailed Tit the generic term *Mecistura*.

The Long-tailed Tit, as its name implies, has the tail long and graduated; three pair of the tail-feathers not only differing from each other in length, but all of them also shorter than the other three pair; the legs and toes rather long and slender; the nest of the most perfect kind, oval in shape, domed at the top, with a small hole at the upper part of one side by which access is gained to the chamber within; the nest is generally fixed in the midst of a thick bush; the bird is more decidedly insectivorous, and some other differences in habits are observable. As, however, the genus *Mecistura* of Dr. Leach has not been adopted by either of the authors whose more recent ornithological works are referred to and quoted at the head of each separate subject here, I have included the Long-tailed Tit in the genus *Parus*.

The Long-tailed Tit is a well-known and common species, that may be seen generally wherever there are woods, thickets, shrubberies, and tall hedges. It remains in this country the whole year, and in its habits among trees it resembles other Tits, being active and lively, almost incessantly in motion, hopping or flitting from branch to branch in search of food; but is more select in its choice than other Tits appear to be, and confines itself almost, if not entirely, to insects and their larvæ. The nest of this species is another example of ingenious construction, combining beauty of appearance with security and warmth. In shape it is nearly oval, with one small hole in the upper part of the side by which the bird enters. I have never seen more than one hole. The outside of this nest sparkles with silver-coloured lichens adhering to a firm texture of moss and wool, the inside profusely lined with soft feathers. The nest is generally placed in the middle of a thick bush, and so firmly fixed, that it is mostly found necessary to cut out the portion of the bush containing it, if desirous of preserving the natural appearance and form of the nest. In this species, the female is known to be the nest maker, and to have been occupied from a fortnight to three weeks in completing her habitation. In this she deposits from ten to twelve eggs; but a larger number are occasionally found: they are small and white, with a few pale red specks, frequently quite plain, measuring seven lines in length, and five lines in breadth. The young family of the year keep company with the parent birds during their first autumn and winter, and generally crowd close together on the same branch at roosting time, looking, when thus huddled up, like a shapeless lump of feathers only. These birds have several notes, on the sound of which they assemble and keep together; one of these call-notes is soft and scarcely audible; a second is a louder chirp or twitter, and a third is of a hoarser kind.

The Long-tailed Tit is a common bird in the southern and western counties of England from Sussex to Cornwall. Mr. Eyton includes it in his Catalogue of the Birds of Shropshire and North Wales; and Mr. W. Thompson says it is diffused in Ireland through the wooded districts of the north particularly, but not in great numbers. It is found also in all the counties north of London, from Middlesex to Northumberland; and Mr. Macgillivray mentions its occurrence in the vicinity of Edinburgh. It is resident all the year in Sweden; and inhabiting Siberia and Russia, is spread southward over the whole European continent even to Italy, and about Palermo in Sicily, where it is also common, and resident all the year. It is observed to be particularly abundant in Holland; and M. Temminck includes it in his Catalogue of the Birds of Japan.

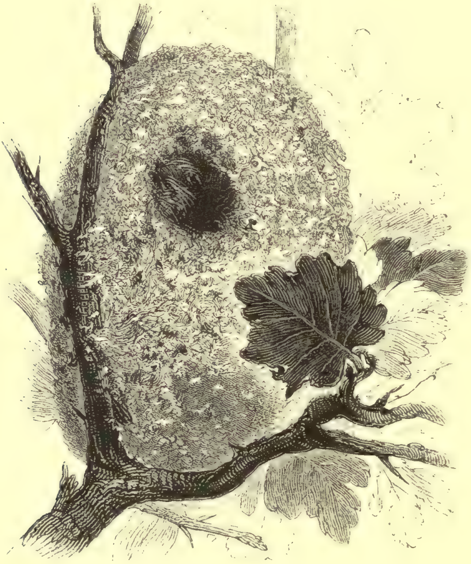
The beak is black; the irides hazel; the top of the head, nape, and cheeks greyish white; over the eye, and descending from thence over the ear-coverts, is a black stripe, narrow, and sometimes said to be entirely wanting in old males, but broader in females; on the upper part of the back a triangular patch of black, one point of which is directed downwards; the shoulders, scapularies, and part of the rump, tinged with rose red; wing-coverts black; wing-primaries greyish black; the tertials broadly edged with white; upper tail-coverts black; the three pair of central tail-feathers very long and black; the next three pair each half an inch shorter than the feather on the same side which precedes it, and all six are black on the inner web, and white on the outer; the whole of the under surface of the body greyish white; the sides, flanks, and under tail-coverts, tinged with rose colour; under surface of the body, greyish white; legs, toes, and claws, almost black.

The whole length of the bird about five inches and a half. From the carpal joint to the end of the wing two inches and one quarter: the first feather very short; the second feather considerably shorter than the third; the fourth and fifth each a little longer than the third; the fifth the longest in the wing.

Females differ but little from males except in having more black about the head.

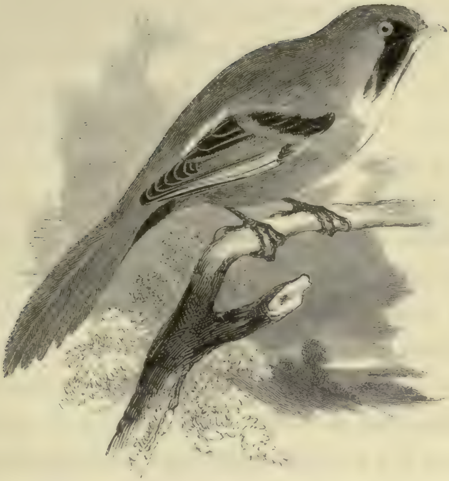
Young birds, as described by Mr. Blyth, have the irides at first much lighter in colour than those of the old birds; the top of the head white; ear-coverts dull black: cheeks, and sides of the neck, mottled with dusky brown; the black on the back not so pure in colour, and the tail-feathers while growing of variable comparative lengths.

The vignette below represents the nest of this bird.



INSESSORES.
DENTIROSTRES.

PARIDÆ.



THE BEARDED TIT.

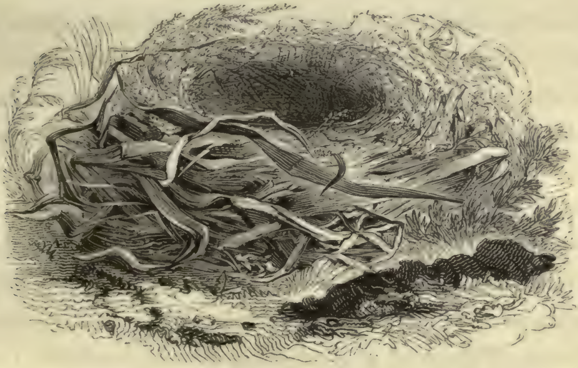
Calamophilus biarmicus.

Parus	*biarmicus,*	*Bearded*	*Titmouse,*	Penn. Brit. Zool. vol. i. p. 540.
"	"	"	"	Montagu, Ornith. Dict.
"	"	"	"	Bewick, Brit. Birds, vol. i. p. 293.
"	"	"	"	Flem. Brit. An. p. 81.
"	"	"	"	Selby, Brit. Ornith. vol. i. p. 244.
Calamophilus	"	"	"	Jenyns, Brit. Vert. p. 125.
"	"	"	"	Gould, Birds of Europe, pt. iv.
Parus	"	*Mésange*	*moustache,*	Temm. Man. d'Ornith. vol. i. p. 298.

Calamophilus. *Generic Characters.*—Beak nearly as in the genus *Parus*, but the upper mandible at its tip is somewhat curved downwards. Wings short, with the fourth feather the longest. Tail very long and graduated. Legs and toes strong, particularly the hind toe and claw.

The Bearded Tit, here figured, was also separated from the genus *Parus* by Dr. Leach, in the "Systematic Catalogue of the Specimens of the Indigenous Mammalia and Birds in the British Museum," already referred to, and there distinguished by the generic term *Calamophilus*, in reference to its decided partiality to live among reeds. The habits of the only species known are distinct: it lives mostly in marshy places, and builds an open cup-shaped nest, which is placed on the ground. The food of this species is seeds, insects and their larvæ, and small shelled snails. The sides of the stomach in this bird are muscular, and much thickened, forming a gizzard which the true Tits do not possess. This structure of the stomach affords the power of breaking down the shells of the testaceous mollusca referred to,—namely, *Succinea amphibia*, and *Pupa muscorum*, many of which have been found comminuted therein. This bird differs also from the Tits in some other minor characters.

From the loose, soft, and almost inaccessible nature of the soil at the sides of rivers in which beds of reeds grow, and which are the places mostly frequented by the Bearded Tit, its habits were formerly but little known; but the communications of various observers to the different periodicals devoted to Natural History, have lately supplied the deficiency. In the month of December, a few years since, a contributor to Mr. Loudon's Magazine, found, after a close search, a flock of eight or ten of these beautiful little creatures on the wing, in a large piece of reeds below Barking Creek, in Essex; "they were just topping the reeds in their flight, and uttering in full chorus their sweetly musical note; it may be compared to the music of very small cymbals, is clear and ringing, though soft, and corresponds well with the delicacy and beauty of the form and colour of the birds. Several flocks were seen during the morning. Their flight was short and low, only sufficient to clear the reeds, on the seedy tops of which they alight to feed, hanging, like most of their tribe, with the head or back downwards. If disturbed, they immediately descend by running, or rather by dropping. The movement is rapid down the stem to the bottom, where they creep and flit, perfectly concealed from view by the closeness of the covert, and the resembling tints of their plumage." Mr. Hoy says, "the borders of the large pieces of fresh water in Norfolk called broads, particularly Hickling and Horsey Broads, are the favourite places of resort of this bird; indeed it is to be met with in that neighbourhood wherever there are reeds in any quantity, with fenny land adjoining. During the autumn and winter they are found dispersed, generally in small parties, throughout the whole length of the Suffolk coast, wherever there are large tracts of reeds. I have found them numerous in the breeding season on the skirts of Whittlesea, near Huntingdonshire; and they are not uncommon in the fenny district of Lincolnshire; whether they are to be met with farther north I have had no means of ascertaining; but they do not appear to have been noticed north of the Humber. It begins building towards the end of April. The nest is composed on the outside with the dead leaves of the reed and sedge, intermixed with a few pieces of grass, and lined with the top of the reed. It is generally placed in a tuft of coarse grass or rushes



near the ground, on the margin of the dikes, in the fen; sometimes fixed among the reeds that are broken down, but never suspended between the stems."

A few years since I obtained two nests from the parish of Horsey. These were both placed near the ground, being sustained only an inch or two above the surface by the strength of the stems of the coarse grass upon which they were fixed. Each nest was composed entirely of dried bents, the finer ones forming the lining, and others increasing in substance made up the exterior. The eggs are from four to six in number, rather smaller than those of the Great Tit, and less pointed, eight lines and a half long by six lines and a half in breadth, white, and sparingly marked with pale red lines or scratches.

Their food during winter, Mr. Hoy says, "is principally the seed of the reed; and so intent are they in searching for it, that he has taken them with a bird-limed twig attached to the end of a fishing-rod. When alarmed by any sudden noise, or the passing of a Hawk, they utter their shrill musical notes, and conceal themselves among the thick bottoms of the reeds; but soon resume their station, climbing the upright stems with the greatest facility. I have been enabled to watch their motions when in search of insects, having, when there has been a little wind stirring, been often within a few feet of them, quite unnoticed, among the thick reeds." In the same volume of the Magazine of Natural History, Mr. Dykes says, "having lately had an opportunity of examining three specimens, I found the crops completely filled with the *Succinea amphibia* in a perfect state, the shells being unbroken. These shells were singularly closely packed together; the crop of one, which was not larger than a hazel nut, containing twenty, and some of them of a good size; it contained also four of the *Pupo muscorum.* Of all these mollusca the shell was quite uninjured; which, when the fragile nature of that of the *Succinea* is considered, is somewhat extraordinary. The shell appears to be passed into the stomach in the same perfect state, as I discovered one which I presume had been recently swallowed, quite entire. They are not, however, voided in this state, for I found the stomach to be full of small fragments of shell, in a greater or less degree of decomposition. This work of destruction is accomplished by the action of the stomach, aided by the trituration of numerous sharp angular fragments of quartz, which had been instinctively swallowed, and by which the minute division of the shells is most completely effected." The Bearded Tits, like the Long-tailed Tits, last described, keep together in families during autumn and winter; two or three families occasionally roving together in a small flock.

South and west of London, the Bearded Tit has been found in Surrey about some ponds near Godalming; in Sussex near Winchelsea; and on the banks of the Thames from London upwards as far as Oxford. Pennant says it has been taken near Gloucester. In Cornwall, as I learn from Mr. Rodd, it is considered very rare; a single specimen was obtained in the neighbourhood of Helston, which is now in the collection made by the late Humphrey Grylls, Esq. It is not included in the Catalogue of the Birds of Shropshire and North Wales, lately published in the Annals of Natural History, by my friend Mr. Thomas Eyton; but is said to have been taken in Lancashire: and a single specimen is recorded as Irish by Mr. Thompson, on the authority of Mr. W. S. Wall, a bird preserver in Dublin, which example was received from the banks of the Shannon.

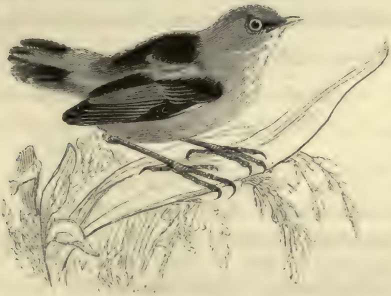
Eastward from London the Bearded Tit inhabits the various reed beds on the banks of the Thames, both in Kent and Essex. It is found also in Cambridgeshire, Suffolk, Norfolk, and Lincolnshire; but has not been traced in this country, as before observed, north of the Humber. Pennant says it is found, though rarely, in Sweden; but as this bird does not appear in the works of Muller, Brisson, or Nilsson, referring to the ornithology of Denmark, Norway, and Sweden, or in the recently published Fauna of Scandinavia by the naturalist last named, I am induced to suppose that Pennant was mistaken on this point. It is very abundant in Holland; and numbers are brought alive from that country to the London Markets for sale: the price is usually four or five shillings a pair; and the birds are attractive in confinement from the beauty of the plumage, their graceful form, and general sprightliness. They are not very common either in France, Provence, Italy, or Sicily; but are found on the marshy borders of the Black and the Caspian seas.

In the adult male, when alive, the beak and irides are of a most delicate orange colour; the head, neck, and ear-coverts, pearl-grey; descending from the space between the base of the beak and the eye is a black pendent whisker, or moustache, of three quarters of an inch in length, and ending in a point; back, greater wing-coverts, and upper tail-coverts, fawn-colour; the smaller wing-coverts black; the primaries greyish brown, with narrow white outer edges; the tertials with broad external edges of fawn colour, bounding a black stripe; the internal webs being buffy white; the middle tail-feathers three inches long, the others shorter and graduated; the outside tail-feather one inch and a half long, black at the base, and white at the end; the two next pairs white on the outer webs, and buffy white on the inner webs; the other six nearly uniform fawn colour. Chin, throat, and breast, white, tinged with grey, and passing into yellowish white on the belly; the sides tinged with salmon colour: the flanks fawn colour; under tail-coverts jet black; legs, toes, and claws, black.

The whole length rather more than six inches; from the carpal joint to the end of the wing two inches and one quarter; the first feather very short; the second feather equal in length to the fifth, but shorter than the third; the fourth the longest in the wing.

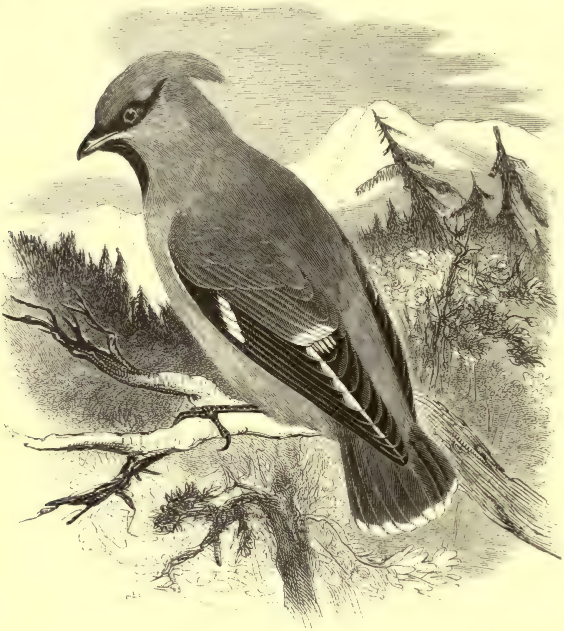
In the female the head is of a dull brownish fawn colour where the male is pearl grey, and the feathers in the situation of the moustache are of the same colour as those of the cheek; the female has sometimes been described as wanting the whiskers; but the elongated feathers are present, though not coloured black; the plumage of the female is in other respects like that of the male, but the colours are not quite so delicate and pure; the under tail-coverts in the female are fawn colour.

In young birds about three weeks old the tertials want the broad white inner webs; the wing and tail-feathers are patched with black; the tail-feathers short, and but slightly rounded; the whole of the under surface of the body fawn colour; the legs light brown. At this age young males have an indication of the whisker in a small black line reaching from the base of the beak to the eye.



INSESSORES.
DENTIROSTRES.

AMPELIDÆ.



THE BOHEMIAN WAXWING.

Bombycilla garrula.

Ampelis garrulus,	*Waxen Chatterer,*	PENN. Brit Zool. vol. i. p. 418.
„ „	*Bohemian* „	MONTAGU, Ornith. Dict.
„ „	*The Chatterer,*	BEWICK, Brit. Birds, vol. i. p. 104.
Bombycilla garrula,	*Bohemian Chatterer,*	FLEM. Brit. An. p 64.
„ „	„ *Waxwing,*	SELBY, Brit. Ornith. vol. i. p. 268.
„ „	„ „	JENYNS, Brit. Vert. p. 125.
Bombycivora „	*Waxen Chatterer,*	GOULD, Birds of Europe, pt. iii.
„ „	*Grand Jaseur,*	TEMM. Man. d'Ornith. vol. i. p. 124.
Bombycilla „	„ „	„ Supplt. p. 70

BOMBYCILLA. *Generic Characters.*—Beak strong, short, and straight; broad at the base; the upper mandible slightly bent at the tip, and emarginated. Nostrils basal, oval, and open, sometimes concealed by closely set feathers directed forwards. Wings long; the first or second quill-feather the longest in the wing. Legs and toes short and strong; the tarsus shorter than the middle toe.

The Bohemian Waxwing is one of the most beautiful of the birds that visit this country, combining as it does a graceful form with a plumage of brilliant and varied colours. It is, however, only a winter visitor, and that, too, at most uncertain intervals; yet coming, as it then does, in flocks, and attracting attention by its gay appearance, as well as its numbers, it can hardly be called a very rare bird, as there is scarcely a northern county in which it has not been frequently killed, and few collections of birds of any extent exist which do not include one or more specimens.

Like most of the winter visitors to this country, the Waxwings come to us from the north, and have been seen in small troops or families of eight or ten in number, occasionally in flocks consisting of some scores, and sometimes even of several hundreds. These are distributed over the country as they proceed southward, and a few reach the counties on our southern coast. Specimens have been killed in Kent, Surrey, and Sussex. The bird from which the figure was taken in the Synopsis of British Birds, by John Walcott, Esq., was killed in Hampshire. Dr. Edward Moore says that several have been shot in the plantations of Mount Edgecumbe, and Saltram in Devonshire; and Mr. Couch, in a Catalogue of Cornish Birds with which he has favoured me, mentions one instance of this bird being killed at Lostwithiel in 1829, and another near Helston in 1835; but examples so far south are much more rare than in the northern counties. Mr. Thomas Eyton notices several specimens that have been killed in Shropshire; and Mr. W. Thompson mentions various instances of the occurrence of this bird in Ireland. In the northern counties of England, and in Scotland, as before observed, the appearance of these birds, though accidental, is much more frequent, and the winters of 1787-88 and 9, 1790 and 91, 1803, 1810, 1820, 22, 28, 1830, 31, 34 and 35, are particularly recorded as having afforded opportunities of obtaining specimens, in some one or other of various northern localities.

Although this bird is called the Bohemian Waxwing, it is not more plentiful in Bohemia than it is in England. It is in the central and southern parts of the European Continent, as it is here, only an accidental visitor in winter. It is a rare bird in France and Provence; still more rare as far south as Italy, and never crosses the Mediterranean Sea. The geographical range of this bird east and west is, however, very extensive. M. Temminck says it is an inhabitant of Japan, a country which produces another species of this same genus. Our bird is found in various northern parts of Asia, Europe, and North America; this latter country also producing another species of this genus; but these three are the only species known; and the European bird is the largest as well as the finest of the three.

The country in which this bird produces its young is not decidedly ascertained, and its habits in that season of the year are but imperfectly known. Frisch says it is a bird of Tartary, where it breeds among rocks. The Prince of Musignano says, " It seems probable that their chief place of abode is in the oriental parts of the old Continent; and, if we may hazard an opinion, we should not be surprised if the extensive and elevated table-land of Central Asia were found to be their principal rendezvous, whence, like the Tartars in former times, they make their irregular excursions." M. Temminck, in the recently published Supplement to his Manual, says the European Waxwing breeds in the eastern parts of the North of Europe, and lives in the northern parts of Asia. M. Nilsson, an ornithologist of Sweden, and the author of a Fauna of Scandinavia, says, these birds pass the summer in the arctic regions; they are seen on their passage in Scania in November, and return in the spring. The remarks of Dr. Richardson are as follows: "This elegant bird has only lately been detected in America, having been discovered in the spring of 1826, near the sources of the Athabasca, or Elk River, by Mr. Drummond, and by myself the same season, at Great Bear Lake, in latitude 65°. In its autumn migration southwards, this bird must cross the territory of the United States, if it does not actually winter within it; but I have not heard of its having been hitherto seen in America to the southward of the fifty-fifth parallel of latitude. The mountainous nature of the country skirting the Northern pacific Ocean being congenial to the habits of this species, it is probably more generally diffused in New Caledonia and Russian American territories, than to the eastward of the Rocky Mountain chain. It appears in flocks at Great Bear Lake about the 24th of May, when the spring thaw has exposed the berries of the alpine arbutus, marsh vaccinium, &c., that have been frozen and covered during winter. It stays only for a few days; and none of the Indians of that quarter, with whom I conversed, had seen its nest; but I have reason to believe that it retires in the breeding season to the rugged and secluded mountain-limestone districts, in the sixty-seventh and sixty-eighth parallels, when it feeds on the fruit of the common juniper, which abounds in these places." In a note, Dr. Richardson adds, "I observed a large flock, consisting of at least three or four hundred individuals, on the banks of the Saskatchewan, at Carlton House, early in May 1827. They alighted in a grove of poplars, settling all on one or two trees, and making a loud twittering noise. They stayed only about an hour in the morning, and were too shy to allow me to approach within gunshot."

Such are the accounts and opinions of observers and naturalists who have written most recently on this bird. Of its habits in this country, it may be briefly stated that it has once appeared as early in the season as August. In that month of the year 1835, a male was killed out of a flock by my friend Joseph Clarke, Esq., at Saffron Walden in Essex. Mr. Frederick Fuller, of Aldborough, on the Suffolk coast, who has also seen these birds alive, and procured specimens for his collection with his own gun, tells me that he found them very shy and difficult to approach, alighting from time to time, and when seen on other occasions were perched, upon the uppermost twigs of tall hedges, very much in the manner of our Red-backed Shrike; but in their activity and incessant change of position or place, they resemble the Tits. In this country these birds are known to feed on the berries of the mountain ash, hawthorn, and ivy, and have been thus fed in captivity, but seldom live long. When fruit or berries are scarce, they are said to feed upon insects, catching them dexterously in the same manner as their distant relatives the Flycatchers. Their call-note is a chirp frequently repeated.

For the opportunity of figuring from a British killed example of this bird, I am indebted to the kindness of my friend Thomas Wortham, Esq., of Royston, who obtained for my use, of his neighbour Mr. Trudgett, the loan of a fine male specimen, which was shot near Royston a few winters since.

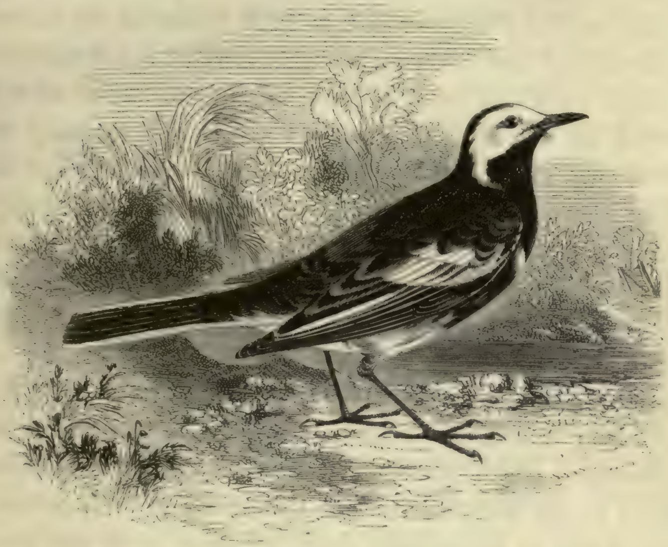
The beak is almost black, but light brown on the edges near the base; the irides dark red; the forehead reddish chestnut ; the feathers on the top of the head a light brocoli-brown, and elongated, forming a crest ; over the base of the upper mandible, on the lore, round the eye, and passing backward round the occiput under the back part of the crest, an elongated circle of black ; nape of the neck light brocoli-brown, becoming darker on the back, scapulars, and small wing-coverts ; the coverts of the primaries black, tipped with white ; primaries and secondaries black, with an elongated patch of straw yellow at the end of the outer web of all except the three first ; the tertials purple brown, tipped with pure white on the outer web ; four of the secondary quill-feathers, and from one to four of the tertials, depending on the sex and age of the bird, terminate in a small, flat, oblong appendage, resembling in colour and substance red sealing wax ; these appendages are merely expanded and coloured horny prolongations of the shafts of the feathers beyond their webs ; upper tail-coverts smoke-grey ; tail-feathers smoke-grey at the base, black towards the end, and tipped with king's-yellow, the shafts of the feathers being slightly tinged with red where the webs are yellow. Under the chin is a patch of velvet black ; at the angle of the mouth the feathers are chestnut, passing on the cheeks, neck, breast, and all the under parts, into pale brocoli-brown, becoming greyish brown on the flanks and abdomen ; under tail-coverts chestnut brown ; axillary plume, and under surface of the wings, ash-grey ; all the plumage silky and soft to the touch ; the legs, toes, and claws, black.

The whole length of the bird rather more than eight inches. From the carpal joint to the end of the wing four inches and a half : the first and second feathers very nearly equal in length, and the longest in the wing, indicating considerable powers of flight.

A female described by Dr. Richardson had the marks on the tips of the primaries untinged with yellow; a narrower yellow tip to the tail, and a smaller and less intensely black mark on the chin. Very old males have sometimes as many as eight red appendages to the wing-feathers; the females never more than five.

Young birds have no waxlike appendages during their first year; and the same may be said of the young of the American species. Neither sex of the new species from Japan, described by M. Temminck, exhibit waxlike appendages at any age; I have not, therefore, included this peculiarity in the generic characters here given.

INSESSORES. *MOTACILLIDÆ.*
DENTIROSTRES.



THE PIED WAGTAIL.

Motacilla Yarrellii.

Motacilla alba,	*White Wagtail,*	PENN. Brit. Zool. vol. i. p. 489.
” ”	” ”	MONTAGU. Ornith. Dict.
” ”	*Pied* ”	BEWICK, Brit. Birds, vol. i. p. 231.
” ”	*White* ”	FLEM. Brit. An. p. 73.
” ”	*Pied* ”	SELBY, Brit. Ornith. vol. i. p. 251.
” ”	” ”	JENYNS, Brit. Vert. p. 114.
” *Yarrellii*	” ”	GOULD, Birds of Europe, pt. ii. under the name of *alba* in the description, and *Yarrellii* in the General Index.
” ”	*Bergeronette Yarrellii,*	TEMM. Man. d'Ornith. vol. iv. p. 620.

MOTACILLA. *Generic Characters.*—Bill slender, subulate, straight, carinated, angulated between the nostrils, emarginated at the tip; the edges of both mandibles slightly compressed inwards. Nostrils basal, lateral, oval, and partly concealed by a naked membrane. Wings of moderate size; the first quill-feather the longest, the second and third equal in length, and nearly as long as the first; the tertials very long. Tarsus much longer than the middle toe; the outer toe of the three in front joined to the middle toe at its base; the claw of the hind toe sometimes elongated. Tail of twelve feathers, long, and nearly even at the end.

In a paper by Mr. Gould, published in the Magazine of Natural History, in the volume for the year 1837, page 459, entitled "Observations on some Species of the Genus *Motacilla*," the following paragraphs occur: "While engaged upon this tribe of birds during the course of my work on the Birds of Europe, I was equally surprised to find that the sprightly and Pied Wagtail, so abundant in our islands at all seasons, could not be referred to any described species; and that it was equally as limited in its habitat; for, besides the British islands, Norway and Sweden are the only parts of Europe whence I have been able to procure examples identical with our bird, whose place in the temperate portions of Europe is supplied by a nearly allied, but distinct species, the *true M. alba* of Linnæus; which, although abundant in France, particularly in the neighbourhood of Calais, has never yet been discovered on the opposite shores of Kent, or in any part of England. As, therefore, our bird, which has always been considered as identical with the *M. alba*, proves to be a distinct species, I have named it after my friend W. Yarrell, Esq. as a just tribute to his varied acquirements as a naturalist."

"The characters by which these two species may be readily distinguished are as follows. The Pied Wagtail of England, *M. Yarrellii*, is somewhat more robust in form, and, in its full summer dress, has the whole of the head, chest, and back of a full deep jet black; while in the White Wagtail, *M. alba*, at the same period, the throat and part of the head alone are of this colour, the back, and the rest of the upper surface, being of a light ash-grey. In winter the two species more nearly assimilate in their colouring; and this circumstance has, doubtless, been the cause of their being hitherto considered as identical; the black back of *M. Yarrellii*, being grey at this season, although never so light as in *M. alba.* An additional evidence of their being distinct, (but which has, doubtless, contributed to the confusion,) is, that the female of our Pied Wagtail never has the back black, as in the male, this part, even in summer, being dark grey, in which respect it closely resembles the other species."

Such are the observations of Mr. Gould, and although concurring with him in opinion that these birds are distinct, it is intended here to give figures and descriptions, as far as requisite, of both birds in their summer and winter plumage, to invite investigation on this subject; premising that M. Temminck, in the Supplement to his Manual, page 171, refers to Mr. Gould's figure in the Second Part of the Birds of Europe, and also to the coloured lithographic figure in Werner's Atlas of Illustrations to the Manual, which, although there called *Motacilla lugubris*, is certainly our Pied Wagtail, as representations of *varieties* of *Motacilla alba.* The Prince of Musignano has considered our bird distinct from *M. alba*, and has admitted it as a species in his recently published Geographical and Comparative List of the Birds of Europe and North America.

The Pied Wagtail of this country, though a very common bird, is deservedly admired for the elegance of its form, as well as for the activity and airy lightness exhibited in all its actions. It is ever in motion, running with facility by a rapid succession of steps in pursuit of its insect food, moving from place to place by short undulating flights, uttering a cheerful chirping note while on the wing, alighting again on the ground with a sylph-like buoyancy, and a graceful fanning motion of the tail from which it derives its name. It frequents the vicinity of ponds and streams, moist pastures, and the grass plots of pleasure-grounds; may be frequently seen wading in shallow water, seeking for various aquatic insects, or their larvæ; and a portion of a letter sent me lately by William Rayner, Esq. of Uxbridge, who keeps a variety of birds in a large aviary near his parlour window for the pleasure of observing their habits, seems to prove that partiality to other prey, besides aquatic insects, has some influence in the constant visits of Wagtails to water. "I had also during the summer and autumn of 1837 several Wagtails, the Pied and Yellow, both of which were very expert in catching and feeding on minnows which were in a fountain in the centre of the aviary. These birds hover over the water, and, as they skim the surface, catch the minnow as it approaches the top of the water in the most dexterous manner, and I was much surprised at the wariness and cunning of some Blackbirds and Thrushes in watching the Wagtails catch the minnows, and immediately seizing the prize for their own dinner."

The nest of our Pied Wagtail is formed of moss, dead grass, and fibrous roots, lined with hair and a few feathers; the nest is sometimes placed on the ground on a ditch bank, sometimes in a hole of a wall, or thatch of an out-building, and it is frequently fixed in the side of a wood stack, or hay-rick; occasionally it has been found occupying a cavity in a peat stack, or a wall of turf sod, but always in the vicinity of water. The eggs are four or five in number; white, speckled with ash-colour, nine lines in length, and seven lines in breadth.

Mr. Jesse, in his "Gleanings in Natural History," records an instance of a Water Wagtail building her nest in one of the workshops of a manufactory at Taunton. "The room was occupied by braziers, and the noise produced by them was loud and incessant. The nest was built near the wheel of a lathe, which revolved within a foot of it. In this strange situation the bird hatched four young ones; but the male, not having accustomed himself to such company, instead of feeding the nestlings himself, as is usual, carried such food as he collected to a certain spot on the roof, where he left it, and from whence it was borne by his mate to the young. It is still more remarkable that she was perfectly familiar with the men into whose shop she had intruded, and flew in and out of it without fear. If by chance a stranger, or any other of the persons employed in the same factory, entered the room, she would, if in her nest, instantly quit it, or if absent, would not return; the moment, however, that they were gone, she resumed her familiarity."

When the young are able to follow the parents, the little family may be seen in meadows very busy about the feet of the cattle while grazing, availing themselves, as White observes, of the flies that settle on their legs, and probably feeding on the worms and larvæ that are roused by the trampling of their feet.

The Pied Wagtail is exceedingly common over the whole of the United Kingdom; and in all the southern parts it is resident throughout the year. In summer it is observed in the Scottish islands; but is more numerous in Orkney than in Shetland, and quits both these northern parts as soon as their breeding season is over. They also quit Scotland, and some of the more northern counties of England before winter, and appear to be somewhat gregarious in their habits when on the move from one locality to another, small flocks being occasionally seen about the vernal and autumnal periods of change. Considering our bird as a distinct species, I have not identified it with the

the localities inhabited by the true *M. alba.* It is probable, as suggested by Mr. Gould, that the Channel is the line of boundary, although stragglers from either side may have been, and probably will be, found on the opposite shores. It appears from what is known of the habits of our bird, and the circumstance of Mr. Gould having received examples of it from Norway and Sweden, that our Pied Wagtail migrates due north and south. Brunnich, in his *Ornithologia Borealis*, page 70, decidedly refers to a variety of *M. alba*, besides including the bird itself; but the excellent coloured figure in the Fauna of Scandinavia, by M. Nilsson, of Lund, now in course of publication, represents the true *M. alba* of Linnæus, the bird next to be described.

The adult male in the plumage of the breeding season, which begins to appear in March, and is completed in April, has the beak and irides almost black , the forehead, the lore, or space between the beak and the eye, the part surrounding the eye, the ear-coverts, the cheeks, and a portion of the side of the neck, pure white ; the crown of the head, nape of the neck, back, scapulars, rump, and upper tail-coverts, black ; the small and great wing-coverts black, broadly edged, and tipped with white ; primary and secondary quill-feathers black, with narrow lighter-coloured outer edges ; the third, fourth, and fifth primaries, with some white on the inner web ; the tertials, one of which is very long, black, with broad white outer borders ; the eight central tail-feathers black ; the two outer tail-feathers, on each side, white, with a black edge on the inner web ; chin, throat, and neck in front, and on the sides, black, which, uniting with the same colour on the anterior part of the wings and scapulars, surrounds the white on the side of the neck ; breast, belly, and under tail-coverts white; sides of the body and flanks black; legs, toes, and claws, black; the hind claw rather short.

The whole length of a male bird seven inches and a half. From the carpal joint to the end of the wing three inches and three eighths; the first three primaries very nearly equal in length, but the first of the three rather the longest in the wing.

The adult female is half an inch shorter in the whole length than the male; and only differs from him, at this season, in having the back lead-grey, mottled with darker feathers, almost as black as those on the back of the male at this season.

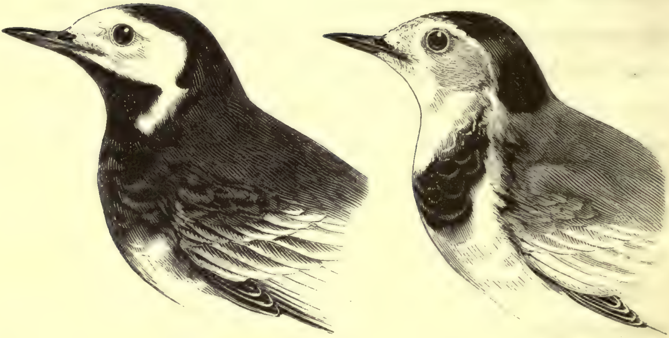
In the adult male and female in winter plumage, the black colour of the head and nape of the neck does not extend to the back, which is then nearly uniform ash-grey; chin and throat white; the black colour on the front of the neck only appearing in the form of a gorget or crescent, the horns of which are directed upwards to the back part of the ear-coverts. The darker colour of the plumage of the breeding season is obtained in the spring by an alteration taking place in the colour of the feathers, not by losing the old feathers and gaining new ones: the annual moult takes place in autumn.

Young birds of the year resemble the parent birds in their winter plumage, except that the head is not black, but ash-grey, like the back; the cheeks and ear-coverts are tinged with yellow, and the upper part of the breast mottled with greyish black.

In their winter dress, as observed by Mr. Gould, there is less difference in the colour of the plumage.

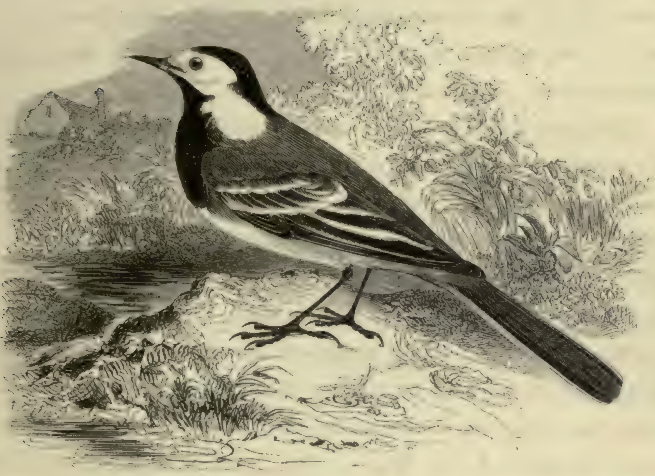
The marked specific distinction between these two Wagtails, is, that the beak of our Pied Wagtail is broader than that of the White Wagtail throughout its whole length from the point to the more dilated base, and that while our pied bird changes on the back from ash grey to black in the breeding-season, the back of the white bird remains as light in colour as it is in winter; even the back of the female of our pied bird changes, and is decidedly much darker in summer than the back of the White Wagtail at the same season.

The vignette represents the appearance of the Pied Wagtail in summer and winter.



INSESSORES.
DENTIROSTRES.

MOTACILLIDÆ.



THE WHITE WAGTAIL.

Motacilla alba.

Motacilla alba, *White Wagtail*, Gould, Birds of Europe, pt. xix.
„ „ *Bergeronette grise*, Temm. Man. d'Ornith. vol. i. p. 255; vol. iii. p. 178.

The belief expressed in the first edition of this work, that attention being directed to the subject, the White Wagtail would be occasionally found in this country as a summer visitor, has been verified in several instances. It happened that late in the month of May 1841 my friend Mr. Fredereck Bond found two pairs of this White Wagtail frequenting the banks of the reservoir at Kingsbury, and succeeded in shooting three of the birds, two males and a female, and very kindly gave me one of the males. In the spring of 1842 a specimen was shot near Carlisle, which is now in the possession of T. C. Heysham, Esq., and during the month of April 1843 I received one and heard of two others that were obtained by Mr. James J. Tratham, in the vicinity of Falmouth. Mr. Bond also told me, in the spring of 1843 that he had again seen one example near the Kingsbury Reservoir.

That this species is the true *Motacilla alba* of Linneus the coloured figures and descriptions of Swedish and other continental authors, leave no room to doubt, and when the subject has been further investigated, it will probably be found that the present species, the true *Motacilla alba*, and therefore called the White Wagtail, is only a summer visitor to Britain, while many of the better known Pied Wagtail remain with us all the year; their numbers, however, receiving an increase by visitors from the continent every spring. A. E. Knox, Esq., who is well located on our southern coast for observations on the migratory birds, and bestows time and great attention to the subject, says, that wagtails arrive on the coast of Sussex by the beginning of March, and generally during a gentle wind from the south. It is probable that both species on their arrival are less distinct in colour than they are afterwards at a later period, and Mr. Knox observes that the Pied Wagtails on their arrival are farther advanced towards the plumage peculiar to the breeding-season, than those which have remained in this country all the previous winter. The permanent pearl grey or light ash grey of the whole of the back in the White Wagtail being the most obvious distinction.

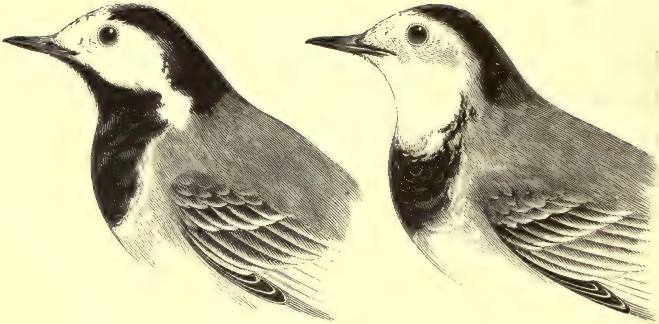
The habits of the two species in this country are probably very similar, or rather it may be more correct to say have not as yet been distinguished, and I quote M. Temminck's manual for those of the continental *Motacilla alba*, where it is stated that it inhabits meadows in the vicinity of streams of water, villages, and old houses. Its food consists of insects of any sort and in any stage of their existence; the nest is placed among grass in meadows, in a fissure of decayed buildings or rocks, or under the arch of a bridge, where five or six eggs are deposited of a bluish white colour, spotted with black. This species is found in summer as far north as the Arctic Regions. Professor Nilsson says that it appears in Sweden in April, and leaves in October. It is spread over the whole of the European continent, and is found also on several of the islands of the Mediterranean, namely Corfu, Sicily, Malta and Crete. Mr. Gould, in his account of this species in his History of the Birds of Europe, says, that it is common in Africa and on the high lands of India.

In the adult male in summer the beak is black, the forehead, region of the eyes, and part of the side of the neck as low as the wing, pure white; top of the head, and a square patch at the back of the neck, black; the scapularies, all the back and upper tail-coverts pearl grey or very light ash grey; wing primaries, tertials, and wing-coverts nearly black with broad outer margins of white; the two outside tail-feathers on each side white, with a narrow line of black on the inner margin; the other tail-feathers black; the chin, neck in front, and the upper part of the breast, black; under surface of the body white; legs, toes, and claws, black.

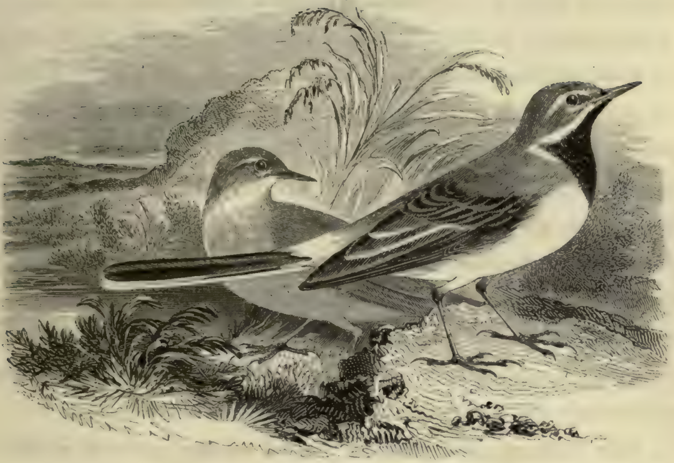
The whole length seven inches and three-eighths; the wing from the anterior bend rather more than three inches: and this bird always appears rather smaller than the Pied Wagtail.

The female, according to M. Temminck, has the forehead and cheeks dull white; the black colour at the occiput covers less space, and the edges of the wing-coverts incline to a greyish white.

The vignette below represents the male bird in the plumage of summer and winter—and renders a description of the plumage in winter unnecessary, the white chin and neck in front being the principal difference,



INSESSORES. *MOTACILLIDÆ.*
DENTIROSTRES.



THE GREY WAGTAIL.

Motacilla boarula.

Motacilla boarula, Grey Wagtail, PENN. Brit. Zool. vol. i. p. 492.
" " " " MONTAGU, Ornith. Dict.
" " " " BEWICK, Brit. Birds, vol. i. p. 233.
" " " " FLEM. Brit. An. p. 74.
" " " " SELBY, Brit. Ornith. vol. i. p. 253.
" " " " JENYNS, Brit. Vert. p. 115.
" " " " GOULD, Birds of Europe, pt. i.
" " *Bergeronnette jaune,* TEMM. Man. d'Ornith. vol. i. p. 257.

THE habits of the Grey Wagtail are in many respects very similar to those of the Pied Wagtail, last described; but, as a species, it is far less numerous, and with some exceptions, to be hereafter noticed, it may be generally considered in this country as a summer visitor to the more northern counties, migrating in autumn to become a winter visitor in those of the south; these changes of locality being generally made in September and April. It is even rather more an aquatic bird than our Pied Wagtail, being seldom seen except about marshes and water meadows, or on the banks or sides of streams. In such situations, and somewhat solitary in their habits, a pair of Grey Wagtails may be seen, shifting from place to place with undulating flight, or running with rapid steps along the margin of, and sometimes wading in, the shallow water in search of various insects, and are known to avail themselves of one very numerous species of fresh-water bivalve, *Cyclas cornea* of Dr. Turton, as food. These birds have been also observed to run upon the tops of the weeds, which are partly submerged in the ditches, and probably feed upon the various species of water-beetles, *Dyticus* and *Gyrinus*, which are almost always to be found in those situations,

The nest of this bird is placed on the ground, seldom very distant from the stream it frequents, and generally on some rugged part of its banks, the inequalities of the ground affording concealment. The structure of the nest is similar to that of the Pied Wagtail, last noticed, being formed of fibrous roots and moss, lined with wool, hair, or feathers. The eggs are from five to six in number, yellowish white, mottled with pale brown, varying sometimes in the depth of the tint ; the eggs are about eight lines and a half in length, and seven lines in breadth. Mr. Selby has observed that these birds produce two broods in the season, the first of which is generally fledged by the end of May. The young birds, till late in autumn, may be frequently seen in company with their parents.

In the counties around London, the Grey Wagtail is a winter visitor ; but Mr. Blyth has recorded that he " once observed a pair of them upon Penge Common in Kent, at the end of May, that evidently had a nest in the neighbourhood, though he was unsuccessful in his repeated endeavours to find it." White of Selborne considered it a winter visitor in Hampshire; but it also occasionally remains in that county in summer. I have been favoured with a communication from Mr. James Rawlance of Fordingbridge, received by the hands of Dr. Thackeray, stating that the Grey Wagtail reared its young on a farm at Fordingbridge, in the summer of 1836: and Mr. Joseph Clark of Saffron Walden, who is well acquainted with birds, saw this same species in the breeding-season when on a visit near Stockbridge. This part of Hampshire, it will be remembered, is intersected by various excellent trout streams running through rich meadows. Montagu, in the Supplement to his Ornithological Dictionary, appears to have become aware "that in a few local instances the grey species had been known to breed in the south of England; and Mr. Turton and Dr. Edward Moore are good authorities for this bird having bred occasionally in Devonshire.

Mr. Couch of Polperro, who, with his usual kindness, has supplied me with extensive notes on the Birds of Cornwall, says of the Grey Wagtail—abundant in winter; and within a few years, I have known some pairs remain with us and breed. Robert Slaney, Esq., says of this bird in Shropshire, "it visits us in autumn, remains during winter about our warm spring heads, and leaves us in spring for the north." In North Wales, according to Mr. Eyton, it is also a winter visitor; but in Lancashire and Cumberland this bird is not only found all the summer, producing its young, but a few remain during winter.

Mr. Thompson says the Grey Wagtail is extensively, but not universally, distributed over Ireland; and, like the Pied Wagtail, is permanently resident throughout the country. The stomach of one examined by this gentleman in December, contained many specimens of the minute river limpet, *Ancylus fluviatilis.*

Of the counties on our eastern coast, the Grey Wagtail appears to be a winter visitor in Essex, Suffolk, and Norfolk; and a summer visitor, according to Mr. Selby, in Durham and Northumberland, a few remaining the whole year. Mr. Selby also mentions having observed this bird in June 1834, upon most of the banks of the rivers and margins of lochs in Sutherlandshire. This species, however, has no very high northern range, never appearing in Denmark, Norway, or Sweden. Southward, on the European Continent, it is resident about Geneva, according to M. Necker, and inhabits Spain, Provence, and Italy, it is found in Corfu, Sicily and Malta. It is also an inhabitant of the island of Madeira. B. Hodgson, Esq., Mr. Gould, and Mr. E. Blyth, have seen specimens of this bird from various parts of India; and M. Temminck states that examples from Japan, Java, and Sumatra exactly resembled the European bird.

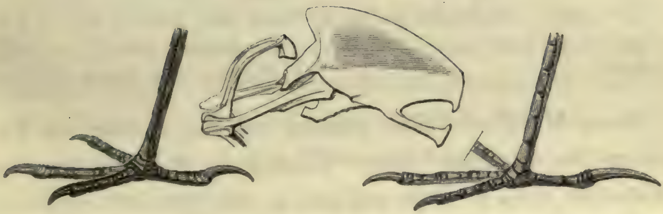
In summer the beak of the male is dusky brown; the edges of both mandibles light brown; irides dark hazel; crown of the head and the ear-coverts slate-grey, with a light buff-coloured streak above the eye extending over the ear-coverts, and another under the ear-coverts; neck, scapulars, back, and rump, slate-grey; wing-coverts and quill-feathers almost black; the coverts tipped with buffy white; the tertials edged with white; upper tail-coverts king's-yellow; the outside tail-feather on each side white; the second and third on each side also white, with a narrow elongated black line on the outer web of each; the six central tail-feathers black, with yellowish edges at the base; the chin and throat black; breast, belly, and under tail-coverts, bright king's-yellow; legs, toes, and claws, pale brown.

The whole length of the bird seven inches and three-quarters, of which the tail-feathers measure nearly half. From the carpal joint to the end of the quill-feathers three inches: the first three primaries nearly equal in length, and the longest in the wing.

In winter the chin and throat are buffy white, without any appearance of black; the breast and belly greyish white, tinged with yellow.

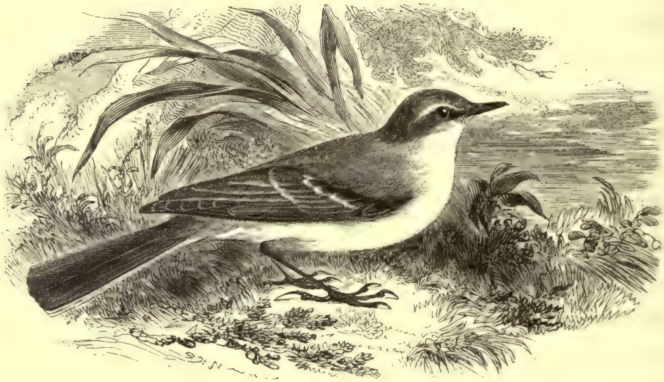
The colours of the female are at all seasons paler than those of the male; and the young bird of the year is like the adult female bird in winter.

The vignette below represents on the left hand the foot and breast-bone of our Pied Wagtail, and on the right hand the foot of Ray's Wagtail.



INSESSORES.
DENTIROSTRES.

MOTACILLIDÆ.



THE GREY-HEADED WAGTAIL.

Motacilla neglecta.

Motacilla	*neglecta,*	*Grey-headed Wagtail,*	GOULD, Birds of Europe, pt. iii.
,,	,,	*Blue* ,, ,,	JENYNS, Brit. Vert. p. 116.
,,	,,	*Grey* ,, ,,	LUBBOCK, Fauna of Norfolk, p. 35.
,,	*flava,*	*Bergeronette printaniere,*	TEMM. Man. d'Ornith. vol. i. p. 260.
,,	,,	,, ,,	,, Supplt. p. 181.
Budytes	,,	,, ,,	P. MUSIGN. Comp. List. p. 18.

SINCE Mr. Gould first pointed out the distinctions between the common Yellow Wagtail of this country, the *Motacilla flava* of Ray, and one of the yellow Continental Wagtails, which is the *Motacilla flava* of Linneus, several examples of this latter species have been killed in England, and one or two in Scotland, it is therefore entitled to a place in this work, and the attention of Ornithologists being drawn to the subject, other examples will no doubt be obtained.

Mr. Gould very clearly proved what appears never to have been even suspected before, that the *M. flava* of English authors was not only a different bird from the *M. flava* of Continental authors; but that our very common Yellow Wagtail was in fact as rare a bird, and as little known on the Continent, as the *M. flava* of the Continent was rare here. Those who contend that the trivial name given by the first describer of a species ought ever to remain unchanged, will still consider that our well-known Yellow Wagtail ought to continue to be called *M. flava*, while those who consider systematic nomenclature as beginning with Linneus, will continue the term *flava* to the Grey-headed Wagtail of Mr. Gould.

When the Grey-headed Wagtail was first named in this country, Mr. Gould, supposing this species had been equally overlooked on the Continent, called it *Motacilla neglecta;* but further communication with Continental Ornithologists convincing him that it was the true *M. flava* of Linneus, and subsequently of Continental authors, it became necessary that the term *neglecta* should be dropped in favour of that of *flava*, which it had so long borne; and it was then considered that justice would also be done to Ray's original notice of our yellow bird, if it was in future to be called *Ray's* Wagtail. I have reason to believe that the application of the term *Rayi*, as appropriated to this bird in the comparative list of the Prince of Musignano, had Mr. Gould's concurrence.

The first British specimen of this bird, obtained in October 1834, on Walton Cliffs, near Colchester, was shot by Mr. Henry Doubleday; two birds were together, and his attention was drawn to them by observing a pair so late in the season, and so long after our common Yellow Wagtail leaves this country. Only one of the two was secured.

In the first volume of the Magazine of Zoology and Botany, it is recorded that at a meeting of the Wernerian Society of Edinburgh in January 1836, Sir Patrick Walker read a notice of the occurrence of the Grey-headed Wagtail on the banks of the water of Leith; and in a note on the same page, 111, a second example is noticed as having occurred near Edinburgh.

The same Magazine has also recorded two other instances of the occurrence of this species. On the 2nd of May 1836, an adult male bird was killed by Mr. Hoy in the parish of Stoke Nayland, Suffolk. In the same month a male specimen was shot a little west of Newcastle. This bird was with another, probably a female, and from the lateness of the season, it is likely they might have bred in the neighbourhood. This last communication was made by Mr. Albany Hancock.

Another was taken in April 1837 near Finsbury, a short distance north-east of London. From this bird, by the kindness of Mr. Joseph Clarke, the figure at the head of this subject was taken. This bird was a fine male in his full summer dress.

H. Gurney, Esq. and the Rev. Richard Lubbock have recorded one example of this species killed at Sherringham, in Norfolk. The specimen is in the Norwich Museum.

On the Continent, Mr. Hoy tells me, this species inhabits wet springy places in moist meadows: and M. Temminck adds, that it frequents the vicinity of water, and the gravelly edges of rivers. As a species it is numerous; common over the central part of Europe, and has a very extensive northern and eastern geographical range. Some British Ornithologists have brought specimens from Sweden and Norway, where it is a summer visitor, appearing in April, and departing in September: it is excellently figured by M. Nilsson in the coloured illustrations of his Fauna of Scandinavia, and in his Tour in Lapland, Linneus mentions having seen this bird in that country on the 22nd of May 1732. This species is found in Sicily and Malta. William Thompson, Esq. while at sea in the month of April, 1841, on his passage from Malta to the Morea, noticed six of these birds visiting the deck of the vessel, and it is found also in Algeria, Nubia, and Egypt. Mr. Gould states that he has received skins of this bird from the Himalaya mountains; and M. Temminck includes it also in his Catalogue of the Birds of Japan.

This bird makes its nest on the ground in holes, sometimes among exposed roots of trees, in cornfields and meadows, laying about six eggs, which, as figured in several Continental works, are so much like those of our common summer visitor to be in future called Ray's Wagtail, that they can scarcely be distinguished. The food of this bird, according to M. Temminck, is flies, moths, small green caterpillars, and aquatic insects.

The figure at the head of this article was taken, as before observed, from a British-killed specimen. I am indebted to Mr. Henry Doubleday for a pair of these birds; and Mr. Hoy has very kindly allowed me the use of seven specimens killed at different seasons of the year. From these ten examples I am enabled to supply the following descriptions.

The adult male, during that part of spring and summer which may be said to constitute the breeding-season, has the beak black; the irides dusky brown; the top of the head, the lore, or space between the beak and the eye, the ear-coverts, and nape of the neck, lead-grey; over the eye, and extending also over the ear-coverts, a distinct white line; the scapulars, back, and upper tail-coverts, greenish olive, tinged with yellow; wing-coverts and quill-feathers, dark brown; the small and great coverts, and the tertials, edged with yellowish white; the two outer tail-feathers on each side, white, with a black border on the inner web of each, that of the second feather being broader than that of the first; the third feather black, with a narrow outer edge of white; the six central tail-feathers nearly uniform black; the chin white, this colour extending as far as the end of the ear-coverts in a line underneath them; the throat, breast, and all the under surface of the body bright gamboge yellow; legs, toes, and claws, black.

The old male in the autumn loses the yellow tint on the back, the greener colour then prevailing, and the whole of the under surface of the body losing brilliancy fades to a primrose yellow.

The length of the male is six inches and a half. From the carpal joint to the end of the wing three inches and one-eighth: the first, second, and third quill-feathers very nearly equal in length; but the first is rather the longest.

The whole length of an adult female is six inches and one-eighth. In the breeding-season the head, ear-coverts, and nape of the neck, are slate-grey; over the eye and ear-coverts a white streak; the back dull olive; the edges of the wing-coverts and tertials nearly white; the chin and throat white; all the rest of the under surface of the body pale king's yellow.

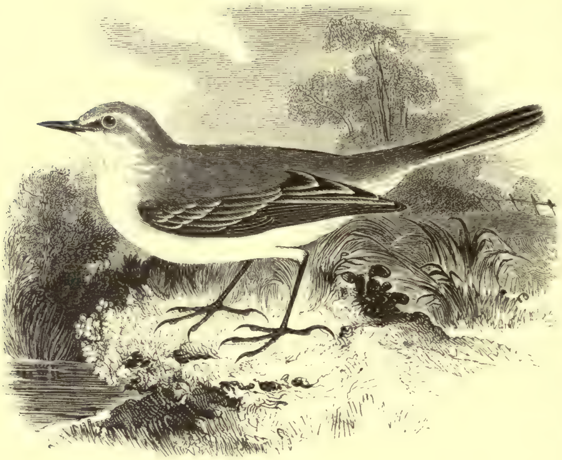
In autumn the grey head of the female is mixed with greenish brown, the white streak over the eye and the ear-coverts remaining; the chin white; throat and breast buffy white; belly, and under tail-coverts, primrose-yellow.

The young male in his first autumn plumage resembles the adult female in the breeding-season, except that the grey of the head is more mixed with brown, and the yellow of the upper part of the breast is clouded with brown and buffy orange. In the following spring the grey feathers of the head still exhibit a slight mixture of olive-green, and the chin is yellow, which in the more adult male is white.

The young female in spring has the head and ear-coverts greyish brown; the chin and throat buffy white; the upper part of the breast mottled with brown; the lower part of the breast, and the other under parts, primrose yellow, enriched with a mixture of king's yellow.

This bird may be distinguished from our common summer Yellow Wagtail, *M. Rayi*, next to be described, by the white elongated line over the eyes and ear-coverts, which appear to be permanent at all seasons, and by the grey head, which is more or less conspicuous, also, at all seasons, but particularly in summer. In Ray's Wagtail, the line over the eye and the ear-coverts is yellow; and the head, I believe invariably, of the same colour as the back of the bird. The females of the two species most resemble each other.

INSESSORES. *MOTACILLIDÆ.*
DENTIROSTRES.



RAY'S WAGTAIL.

Motacilla flava.

Motacilla flava,	*Yellow Wagtail,*	PENN. Brit. Zool. vol. i. p. 491.
„ „	„ „	MONTAGU, Ornith. Dict.
„ „	„ „	BEWICK, Brit. Birds, vol. i. p. 234.
„ „	„ „	FLEM. Brit. An. p. 74.
„ „	„ „	SELBY, Brit. Ornith. vol. i. p. 255.
„ „	„ „	JENYNS, Brit. Vert. p. 115.
„ „	„ „	GOULD, Birds of Europe, pt. iii.
„ *flaveola,*	*Bergeronnette flavéole,*	TEMM. Supplt. to Man. p. 183.
Budytes Rayi,	„ „	P. MUSIGN. Comp. List. p. 18.

THE common Yellow Wagtail of England, first described by our countryman and naturalist John Ray, and now proposed, for distinction's sake, to be called Ray's Wagtail,* is a constant summer visitor to this country, making its appearance about the end of March, or the beginning of April, and leaves our southern shores in September. Like most of our summer visitors, this species comes to us from the south, and in its habits is very like the other Wagtails, except that it does not appear to be, like them, so decidedly partial to water. It frequents arable land, and inhabits fields of peas and tares, in both of which I have found its nest; it also frequents open downs and sheep pastures, fields of young green corn, and not unusually dry fallows, where, perched on a clod of earth, or upon a stone, this bird may be seen fanning his tail, and exhibiting his rich yellow breast to the greatest advantage. The nest is placed on the ground, and is generally formed of dried bents and fibrous roots, lined with hair; the eggs are from four to six in number, not unlike those of the Sedge Warbler, but rather larger; whitish in colour, mottled nearly all over with yellow brown and ash brown; the length eight lines and a half, the breadth six lines and a half.

---

* There are four species of Wagtails on the European Continent, all of which are bright yellow in summer.

The young birds are able to fly about the end of May; and may be seen from that time to the period of their autumnal departure following the parent birds in search of food. Like others of the genus, they are frequently to be seen attending cattle and sheep while grazing, running about so close to their feet as to appear in danger of being trodden upon. A writer observes, "I have seen as many as seven, which I concluded were the parents and their offspring, running and dodging just before the cow's head, apparently catching small insects. I suppose that the cattle disturbed small flies, which are the favourite food of this bird, lodged in the grass, and which as soon as they arose were caught by the watchful Wagtail before they could secure their retreat into the grass. We thus see it demonstrated how one animal is subservient to the wellbeing of another."

The call-note of this bird is more shrill than that of the other Wagtails, and consists of two notes repeated in succession, the second of which, in the musical scale, is one whole tone lower than the first. This species is numerous, and generally diffused during summer from the southern coast of England as far north as Durham and Northumberland; where, according to Mr. Selby, they collect in small flocks after the breeding-season, and move southwards towards the end of August. Montagu observed flocks of these birds in Devonshire in the autumn of 1802, 3, 4, and 5, and every succeeding year they were observed sooner or later in the southern promontories of Devon. According to Dr. Edward Moore, similar assemblages of these birds take place every year at the present time; and Mr. Blyth mentions having "noticed a small flock of them, early one morning in September, upon the sands in the isle of Jersey, which had apparently not long alighted from a journey across the Channel, and had probably taken their departure from some part of the West of England."

The geographical range of this species, as far as at present known, is very limited; it appears to be a rare summer visitor even to Ireland, according to Mr. Thompson; and M. Temminck states that he has certainly never seen it on the continent of Europe in any locality between the Baltic and the Mediterranean.

I am indebted to my friend Mr. Henry Doubleday of Epping, for the finest specimen of this bird I ever saw, an adult male in brilliant summer plumage. The beak is black; the irides hazel; the top of the head, the lore, ear-coverts, nape of the neck, scapulars, and back, very pale olive, rather darkest on the back; over the eye and ear-coverts a streak of brilliant gamboge yellow; wing-coverts and quill-feathers dusky brown, the former tipped, the tertials edged and tipped, with yellowish white; upper tail-coverts olive; the two outer tail-feathers on each side white, with a streak of black on the inner web, all the others brownish black; the chin, throat, breast, and all the under surface of the body a bright, rich gamboge yellow; legs, toes, and claws, black.

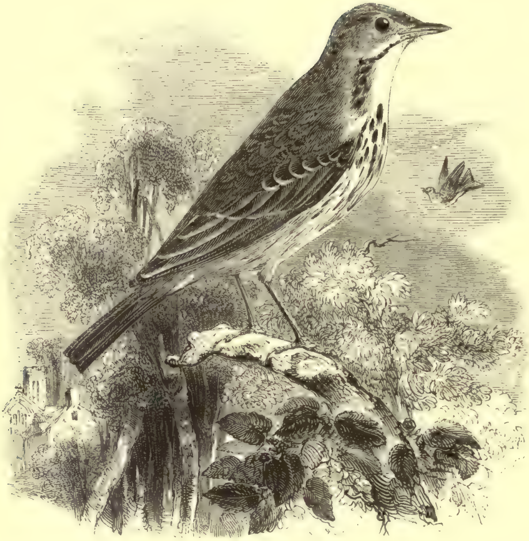
The whole length of the bird six inches and a half. From the carpal joint to the end of the wing three inches and one eighth: the first three quill-feathers very nearly equal in length, but the first rather the longest.

The plumage of the female at the same season of the year is much less rich in colour, the back being tinged with darker brown, and the under surface of the body of a less brilliant yellow. Young birds of the year, and the parent birds after the moult which immediately succeeds the breeding-season, resemble each other considerably; the olivaceous band observed in some across the breast, is, I believe, a sign of youth, and probably remains till the first spring change, when the birds are nearly twelve months old.

Having frequently examined specimens of our Wagtails in the spring of the year, when they were assuming either the change of colour, or the additional brilliancy of tint, peculiar to the breeding-season, without finding any new feathers in progress, I am induced to consider the vernal change in these birds as so many instances of alteration effected in the colour of the old feathers, and not a change of the feathers themselves.

INSESSORES.
DENTIROSTRES.

ANTHIDÆ.



THE TREE PIPIT.

Anthus arboreus.

Alauda trivialis,	*Pipit Lark,*	Penn. Brit. Zool. vol. i. p. 484.
,, ,,	,, ,,	Montagu, Ornith. Dict.
,, *minor,*	*Tree Pipit,*	Bewick Brit. Birds, vol. i. p. 223.
Anthus,	*Field Titling,*	Flem. Brit. An. p. 75.
,, *arbore*	*Tree Pipit,*	Selby, Brit. Ornith. vol. i. p. 262.
,, ,,	,, ,,	Jenyns, Brit. Vert. p. 118.
,, ,,	,, ,,	Gould, Birds of Europe, pt. xix.
,, ,,	*Pipit des buissons,*	Temm. Man. d'Ornith. vol. i. p. 271.

Anthus. *Generic Characters.*—Beak straight, slender; the superior ridge at the base of the upper mandible rather elevated; the sides compressed towards the point; the tip slightly bent downwards and emarginated. Nostrils basal, lateral, oval, partly concealed by a membrane. Wings with the first three quill-feathers very nearly equal in length, and the longest in the wing; the tertials very long. Toes three before, and one behind, with the outer toe united to the middle one as far as the first joint; hind claw curved, and more or less produced.

M. Bechstein separated the Pipits from the true Larks, and proposed the generic term of *Anthus* for the former; this division and name have been generally adopted; it would still further assist correct definition, if among ourselves the term Titlark could be discontinued entirely; the Tree Pipit being called the Titlark by some, the Meadow Pipit a Titlark by others, and round the sea coast where the Rock Pipit is generally the most frequent of the three, that is also called Titlark. Scarcely any two British Birds have been so frequently confounded together as the Tree and the Meadow Pipits; but when the two species are examined in hand, distinctions will be found that are sufficiently obvious and constant; and there are besides differences in the habits of these birds, as well as in the localities they each frequent. The Tree Pipit is rather the larger bird of the two; the beak is stouter and stronger; the spots on the breast larger and fewer in number; the claw of the hind toe is not so long as the toe itself; the tertial feathers of the wings are rather longer in proportion to the primaries; the white on the outer tail-feather on each side is neither so pure in colour, nor is it spread over so large a portion of the feather; and, as far as my own observation goes, it does not appear to be so numerous as a species as the Meadow Pipit.

The Tree Pipit is a summer visitor to this country, arriving about the third week in April, and frequents the enclosed and wooded districts of England; it is not uncommon around London, and I have observed it frequently in the highly cultivated and wooded parts of Kent. The male has a pretty song, perhaps more attractive from the manner in which it is given than the quality of the song itself. He generally sings while perched on the top of a bush, or one of the upper branches of an elm-tree standing in a hedge row, from which, if watched for a short time, he will be seen to ascend on quivering wing about as high again as the tree, then stretching out his wings and expanding his tail, he descends slowly by a half-circle, singing the whole time, to the same branch from which he started, or to the top of the nearest other tree; and so constant is this habit with him, that if the observer does not approach too near to alarm him, the bird may be seen to perform this same evolution twenty times in half hour, and I have witnessed it most frequently during and after a warm May shower.

The nest of this bird is placed on the ground in woods and plantations, sometimes sheltered by tufts of herbage on the grassy bank of a wood hedge, or under a low bush; and Mr. Neville Wood mentions one instance that occurred to him, in which the nest of this bird was fixed on the lowest branch of a small thick bush. The nest is formed of moss, with fibrous roots and dried grass, lined with fine bents and a few hairs: the eggs are four or five in number, and exhibit considerable variation in colour in different nests, the most characteristic, however, being of a greyish white ground colour, clouded and spotted with purple brown, or purple red; the length of the egg about ten lines, by eight lines in diameter. Like the Wagtails and Larks, the Pipits walk and run on the ground: and the food of this species is insects and worms.

The Tree Pipit is found in all the wooded and cultivated districts of the southern counties of England; but is seldom found in any open unenclosed country. It is comparatively rare in Cornwall; not very numerous in either South or North Wales; and some doubts are still entertained whether it extends its range to Ireland. North of London it is common in the parts of those counties which are congenial to its habits; Mr. Neville Wood says it is abundant in the sheltered and cultivated parts of

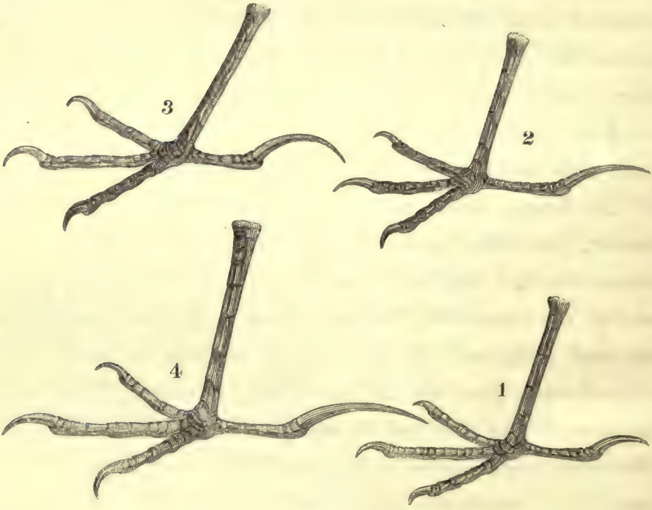
Derbyshire; and Mr. Selby includes it among the birds of Durham and Northumberland, as a summer visitor, making its first appearance every season in May.

Our Tree Pipit is a summer visitor also to Denmark, Norway, and Sweden, and from thence southward is diffused generally over the European Continent to Italy; but in Provence, at Genoa, and Rome, it is still only a summer visitor, going farther south in September. It is known to be an inhabitant of the Island of Madeira, and is found at Tangiers and Algeria; it is also found in Sicily, Malta, and Crete, and M. Temminck includes it in his Catalogue of the birds of Japan.

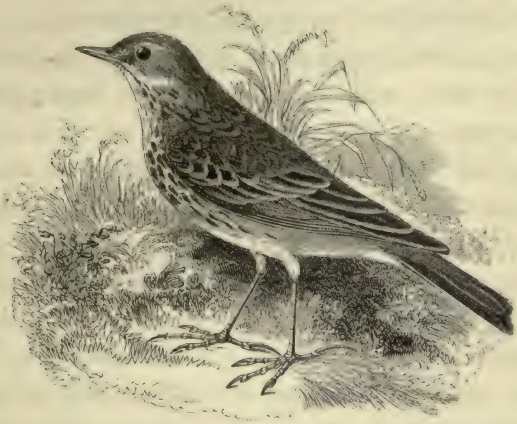
The beak is dark brown; the base of the lower mandible pale yellow brown; the irides hazel; the head, neck, back, and wings, olive brown, of two shades of colour, the centre of each feather being darker than the surrounding edge; the smaller rounded wing-coverts blackish brown, edged and tipped with buffy white; the greater wing-coverts also dark brown, edged with pale brown, the light-coloured ends of the two sets of coverts forming bars across the wing; quill-feathers dark brown; the tertials large, with a broad outer edge of pale brown; upper tail-coverts nearly uniform brown; the outer tail-feather on each side, with nearly all the narrow outer web, and part of the broad inner web, of a dull white, tinged with brown, the other parts of the feather clove brown; the second feather has only a small patch of dull white at the end of the inner web, the remaining portion of that feather on each side, and all the central feathers between them, clove-brown, the two in the middle having lighter brown margins. The chin and throat pale brownish white; from the lower angle of the under mandible a dark brown streak passes backwards and downwards; below this line on the sides of the neck, and on the breast in front, are various elongated spots of dark brown, which are better defined in the males than in the females; belly and under tail-coverts pale brown; the flanks streaked with darker brown; the legs, toes, and claws, pale yellow brown; the hind claw considerably curved, and shorter than the hind toe, hence one of the provincial names for this bird is the Short-heeled Field Lark.

The whole length of the bird is about six inches and a half. From the carpal joint to the end of the wing three inches and three-eighths: the first three primaries nearly equal in length, but the first is the longest; one broad tertial feather reaching beyond the longest primary, when the wing is closed.

The male is rather larger than the female; but the two sexes are nearly alike in plumage. At the moult, these birds acquire a greenish tint on the upper surface of the body, and an ochreous yellow on the throat and breast.



INSESSORES. *ANTHIDÆ.*
DENTIROSTRES



THE MEADOW PIPIT.

Anthus pratensis.

Alauda pratensis,	*The Titlark,*	Penn. Brit. Zool. vol. i. p. 481.
" *trivialis,*	*Pipit Lark,*	Montagu, Ornith. Dict.
" *pratensis,*	*Titlark,*	" " "
" "	"	Bewick, British Birds, vol. i. p. 225.
Anthus "	*Meadow Titling,*	Flem. Brit. An. p. 75.
" "	" *Pipit,*	Selby, Brit. Ornith. vol. i. p. 260.
" "	" "	Jenyns, Brit. Vert. p. 117.
" "	" "	Gould, Birds of Europe, pt. xvi.
" "	*Pipit Farlouse.*	Temm. Man. d'Ornith. vol. i. p. 269.

The Meadow Pipit is the smallest, the most common, and accordingly the best-known species of this genus, and is resident in the British Islands throughout the year. It inhabits commons and waste lands generally, appearing to prefer uncultivated districts; and in the northern lake counties of England it is called the Ling Bird, from its constantly frequenting the moors, where it is one of the few small birds that are to be seen in such localities. It is not, however, exclusively confined to heath and hill, but may also be found in meadows and marsh land, frequenting more exposed situations during summer, and seeking the shelter of valleys and plains in winter. When progressing from place to place, the flight of this bird is performed by short unequal jerks; but when in attendance on its mate and undisturbed, it rises with an equal vibratory motion, and sings some musical soft notes on the wing, sometimes while hovering over its nest, and returns to the ground after singing. Occasionally it may be seen to settle on a low bush; but is rarely observed sitting on a branch of a tree, or perched on a rail, which is the common habit of the Tree Pipit. The Meadow Pipit, when standing on a slight mound of earth, a clot, or a stone, frequently moves his tail up and down like a Wagtail; and Mr. Neville Wood mentions that he has heard him sing while thus situated on or very near the earth.

The Meadow Pipit seeks its food on the ground, along which it runs nimbly in pursuit of insects, worms, and small slugs. In the stomach of one of these birds, examined in the month of December, Mr. Thompson of Belfast found two specimens of *Bulimus lubricus*. According to this gentleman, the name of the Meadow Pipit in the north of Ireland is Moss-cheeper, the term having reference to the moss and peat covering the ground mostly inhabited by the bird, and also to its call-note. In the county of Kerry, Mr. Thompson adds, this bird is called Wekeen, another reference probably to the double-*ee*-like sound of its call-note. Sir Robert Sibbald, in his *Scotia Illustrata*, published in 1684, and considered to be the first Fauna of Scotland, gives Moss-cheeper and Titling as the names of the Meadow Pipit in that country.

The nest of this bird is built on the ground, among grass generally : it is constructed externally of dried bents, lined with finer bents, and some hairs : the eggs are from four to six in number, of a reddish brown colour, mottled over with darker brown ; the length of the egg nine lines by seven lines in breadth. The parent bird has been observed to feign being wounded for the purpose of withdrawing attention from its nest. W. Thompson, Esq. in his valuable communications on the Natural History of Ireland,* mentions that "his friend at Cromac has frequently found the nest of the Meadow Pipit on the banks of water-courses and drains, as well as on the ground in fields. One which was known to him at the side of a drain was discovered by some bird-nesting boys, who pulled the grass away that concealed it. On visiting it the next day, he observed a quantity of withered grass laid regularly across the nest ; on removing this,—which, from its contrast in colour with the surrounding herbage, he considered must have been placed there as a mark by the boys,—the bird flew off the nest ; and on his returning the following day, he found the grass similarly placed, and perceived a small aperture beneath it by which the bird took its departure, thus indicating that the screen, which harmonised so ill with the surrounding verdure, had been brought there by the bird itself. The same gentleman once introduced the egg of a Hedge Accentor into a Meadow Pipit's nest, containing two of its own eggs ; but after a third egg was laid, the nest was abandoned." The desertion of the nest was probably induced by the visits of the observer, rather than by the introduction of the strange egg, as the egg of the Cuckoo is more frequently deposited and hatched in the nest of the Meadow Pipit than in that of any other bird.

---

* Magazine of Zoology and Botany, and Annals of Natural History.

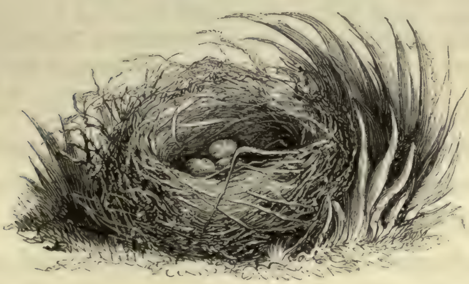
The Meadow Pipit, Titling, or Moss-cheeper, is as well known on the heathery mountains of Scotland as it is in England, Wales, or Ireland. According to Dr. Neill, Mr. Bullock, the Rev. Mr. Low, — the author of the *Fauna Orcadensis*,—and Mr. Dunn, it is common also in summer on the Islands of Orkney and Shetland, remaining on some of the former throughout the year. It is common also during summer in Denmark, Sweden, and Norway, taking a very high northern range, and visiting even the Faroe Islands and Iceland. It inhabits the whole of the European continent, being common as far south as Spain, Italy, and Corfu, frequenting the plains from October to the spring, and passing the summer on the hills and mountains. It inhabits Tangiers, Sicily, and Malta, it is found also in Egypt and at Trebizond . Mr. Gould has seen specimens from Western India; and M. Temminck includes it in his Catalogue of the Birds of Japan.

The beak of this bird, which is more slender than that of the Tree Pipit, is dark brown, but inclining to light yellow brown at the base of the under mandible : irides hazel; the feathers of the head, neck, back, wing, and upper tail-coverts, dark brown in the middle, much lighter brown at the margin all round; both sets of wing-coverts broadly edged with pale wood-brown; primaries, secondaries, and tertials, brownish black, edged with light brown; the two central tail-feathers rather shorter than the others, and dark brown ; the outer tail-feather on each side white, with a small patch of brown on the broad inner web ; the next tail-feather on each side dark brown, with a small patch of white at the tip of the inner web ; the six other tail-feathers blackish brown ; the chin, throat, and sides of the neck, pale brownish white ; ear-coverts a uniform patch of darker brown ; the breast spotted with dark brown, on dull white, tinged with brown, the spots more numerous than on the same part in the Tree Pipit; belly and under tail-coverts dull white tinged with brown; legs, toes, and claws, light brown; the claw of the hind toe slender, slightly curved, and as long as the toe.

The plumage obtained at the moult which immediately follows the rearing of the young, has on the upper surface a rich tinge of olive mixed with the light brown colour, and the under surface is enriched with an ochreous yellow, both these colours remaining till the following spring, about which time it is lost by degrees, apparently from the age of the feather.

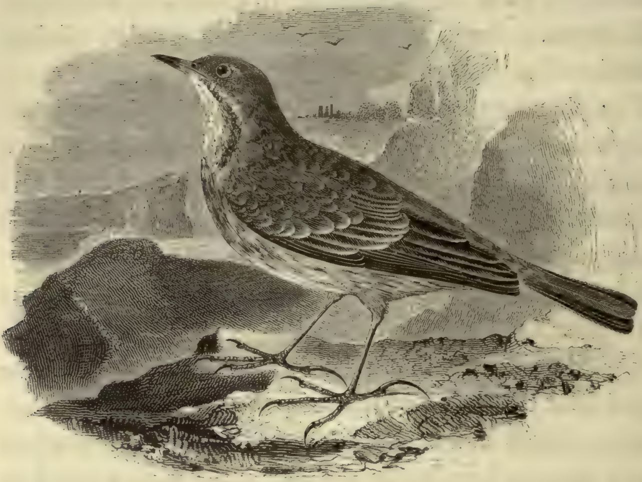
The whole length of the bird is six inches. From the carpal joint to the end of the longest primary three inches, to three inches and one-eighth: the first four quill-feathers nearly equal in length, but the first is the most pointed in shape, and rather the longest in the wing.

Young birds of the year have the olivaceous and yellow tints similar to those on the plumage of the parent birds in autumn after their moult.



INSESSORES.
DENTIROSTRES.

ANTHIDÆ.



THE ROCK PIPIT.

Anthus petrosus.

Alauda obscura,	*Dusky Lark,*	Penn. Brit. Zool. vol. i. p. 482.
,, ,,	*Rock Lark,*	Montagu, Ornith. Dict.
,, *campestris,*	*Field Lark,*	Bewick, Brit. Birds, vol. i. p. 221.
Anthus petrosus,	*Sea Titling,*	Flem. Brit. An. p. 74.
,, *aquaticus,*	*Rock Pipit,*	Selby, Brit. Ornith. vol. i. p. 258.
,, *petrosus,*	,, ,,	Jenyns, Brit. Vert. p. 118.
,, *aquaticus,*	,, ,,	Gould, Birds of Europe, pt. xxii.
,,	*Pipit Spioncelle,*	Temm. Man. d'Ornith. vol. i. p. 265.

The Rock Pipit in its habits, mode of flight, and song, so closely resembles the two species already described, as for a long period to have been confounded with them. Colonel Montagu became aware of the distinction, and suggested the subject to Mr. Lewin, who figured and described this species under the name of Dusky Lark, in his large work on British Birds, with coloured illustrations.

The localities frequented by the Rock Pipit are, however, strikingly distinguished from those in which the other Pipits are so constantly found. I do not remember to have seen the Rock Pipit except within a short distance of the sea-coast; and so generally is it there distributed, that I never remember looking for it, when visiting any part of our sea-coast, without finding it. It does not wander far inland, and is very seldom seen at any considerable distance from the sea. It remains in this country on the coast throughout the year. Montagu found it along the whole line of shore from Kent to the Land's End. It inhabits the shores of South and North Wales. Mr. Thompson mentions it, as observed by himself, on the north, west, south, and east coasts of Ireland; and Mr. Selby mentions it as occurring along the Northumbrian coast, and the eastern shores of Scotland.

Though called the Rock Pipit, it inhabits as well low flat shores in the vicinity of the sea, and the neighbouring salt marshes, where it feeds on marine insects, sometimes seeking its food close to the edge of the retiring tide; and I have seen these birds very busily engaged in the examination of seaweed, apparently in search of the smaller crustacea. This bird is readily distinguished from the Tree and Meadow Pipit by its larger size; the hind claw long, and very considerably curved.

The Rock Pipit makes its nest on the ground; and if the coast is bounded by rock or cliff, the favourite places are the grass-grown ledges at various elevations on the surface opposed to the sea. The nest is made up of several sorts of dry grasses; the eggs are four or five in number, of a greyish white, tinged with green, and mottled nearly all over with ash brown; the length is nine lines and a half, by seven lines and a half in breadth. The young are hatched early in spring.

The Rock Pipit, besides the localities already quoted, is probably to be found on all the shores of the United Kingdom. Mr. Dunn says, it is abundant in all parts of Shetland and Orkney. Professor Nilsson says it is migratory in Sweden, only visiting that country in summer: Mr. Hewitson saw it in Norway, and M. Temminck says that it goes as far north as Greenland. Dr. Richardson and Mr. Swainson quote *Anthus aquaticus* as an inhabitant of North America; but after a close examination of specimens from that country agreeing exactly with Mr. Swainson's excellent figure, I cannot but consider that bird as distinct from our own.

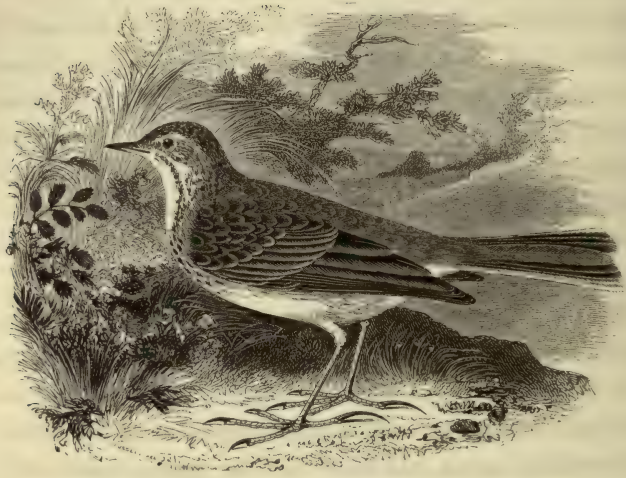
On the European Continent, the Rock Pipit is abundant over the maritime shores of Holland, and occasionally on the borders of the Rhine. M. Vieillot says, it is seen as a migratory bird on the banks of rivers in France; and it is included in Ornithological works referring to Provence, Switzerland, and Italy, as an occasional visitor in summer; it is also found at Malta. M. Temminck says, that specimens of this bird from Japan only differ from European examples in the plumage being a little darker in colour, and the spots on the under surface of the body being a little larger.

The beak is dark brown on the upper part of the upper mandible, and on the point of both mandibles, the base and edges of both pale yellow brown; irides dark brown; over the eyes and ear-coverts a light-coloured streak, not always conspicuous; the top of the head, ear-coverts, nape of the neck, back, wings, and upper tail-coverts, nearly uniform olive brown, the centre of the feathers on the back only being rather darker than their edges; quill-feathers dark brown ; the outer tail-feather on each side pale brownish white, lightest in colour at the end ; the next feather on each side dark brown, with a light-coloured tip only ; the next three on each side very dark brown ; the two central feathers light brown, and shorter than the others ; the tail in shape slightly forked ; the chin dull white ; the throat, breast, belly, and under tail-coverts, yellowish brown, slightly tinged with green, spotted and clouded with brown ; the flanks olive brown ; the legs, toes, and claws brown ; the hind claw longer than the toe, larger than that of the Meadow Pipit, and considerably curved.

The sexes do not differ in plumage ; during the breeding season the adult birds on the upper surface of the body are of a dull brown ; but slightly tinged with green, and the outer tail-feathers on each side exhibit more white. After the breeding season, old birds and the young birds of the year have more of the olive tint above, and the outside tail-feathers are dull whitish brown.

The whole length of an adult bird is about six inches and three-quarters, but rather less than more. From the carpal joint to the end of the longest primary three inches and five-eighths : the first quill-feather rather the longest of the whole ; the next three but a trifle shorter than each other in succession ; the fifth feather three-eighths of an inch shorter than the fourth.

INSESSORES. *ANTHIDÆ.*
DENTIROSTRES.



RICHARD'S PIPIT.

Anthus Ricardi.

Anthus Ricardi,	*Richard's Pipit,*	Bewick, Brit. Birds, vol. i p. 219.
„ „	„ „	Flem. Brit. An. p. 75.
„ „	„ „	Selby, Brit. Ornith. vol. i. p. 264.
„ „	„ „	Jenyns, Brit. Vert. p. 117.
„ „	„ „	Gould, Birds of Europe, pt. xvii.
„ „	*Pipit Richard*	Temm. Man. d'Ornith. vol. i. p. 263.

This fine species was first made known as an occasional visitor to England by the late N. A. Vigors, Esq., M.P., who obtained a specimen that was taken alive in the neighbourhood of London in October 1812. Mr. Gould, in his Birds of Europe, mentions two instances that occurred of the capture of this species, also near London, in the spring of 1836. Mr. Rennie, in his edition of Montagu's Ornithological Dictionary, notices two instances of this bird, one of which was taken alive in Copenhagen Fields, near London, which I believe is intended to refer to the example recorded by Mr. Vigors: the other was taken near Oxford. The British Museum also contains a British specimen, recently added to the collection, which is said to have been killed at Bermondsey; and Mr. W. Proctor, the curator of the Durham University Museum, informs me that he shot a specimen of this bird on the 13th of February, 1832, near Howick, on the Northumbrian coast, which is now in the collection of the Rev. Thomas Gisborne, of Yoxall Lodge, Staffordshire.

Since then four examples are recorded to have been killed in Cornwall; four in Devonshire; two in Kent, and three in Norfolk.

The habits of this species, as far as the peculiarities of so rare a bird can be known,—for it is equally scarce on the Continent,—are said to be very similar to those of the other Pipits. It is mostly observed on the ground, where it stands very high, and runs with facility, waving the tail up and down with a gentle airy motion, like that observed in the Wagtails; while its long hind claw, but slightly curved, connects it with the Larks. So scarce is this species in foreign collections, that M. Temminck appears to have seen but two specimens; examples, however, have been obtained in Germany, France, Spain, Italy and Malta. This bird was named *Ricardi* in compliment to a very zealous amateur of ornithology, who first made known an example captured in Lorraine in autumn; the bird has also been taken in Picardy. M. Savi says, that three specimens only were known to him as having been obtained in Italy; and this species probably inhabits the countries south of the Mediterranean from whence stragglers occasionally visit the southern parts of Europe. B. Hodgson Esq. has found it in

Nepal, and Mr. Blyth has recorded its occurrence in the vicinity of Calcutta.

The note of this bird is said to be very loud, and is heard at a great distance; its food consists of various insects; and its eggs, as noticed by M. Polydore Roux in his Ornithology of Provence, have a reddish white ground colour, speckled with darker red and light brown; the length ten lines and a half, by seven lines and a half in breadth.

The figure of Richard's Pipit here given was taken, by permission, from the bird originally obtained by Mr. Vigors, which, with his whole collection, was some years since presented to the Zoological Society.

The upper mandible of the beak is dark brown, the lower mandible pale yellow brown; the irides very dark brown, almost black; a light-coloured streak passes over the eyes and ear-coverts, the latter are brown; the feathers on the top of the head, nape, back, wing, and upper tail-coverts, are clove brown in the middle, with lighter yellowish brown edges; the margins of all the wing-coverts and tertials buffy white; quill-feathers dark brown; the outer tail-feather on each side is dull white, with an elongated patch of brown at the base of the inner web; the next feather on each side is also in part dull white, but the brown colour on the inner web extends over a larger surface; the three next feathers on each side are very dark brown; the two middle tail-feathers are shorter than the others, not so dark a brown, and have light wood-brown coloured edges.

The chin, throat, and all the under surface of the body, dull white, tinged on the sides of the neck and on the upper part of the breast with yellowish brown, and spotted with dark brown; the flanks are also tinged with pale yellow brown; legs, toes, and claws, pale flesh colour: the hind claw very long, and but slightly curved.

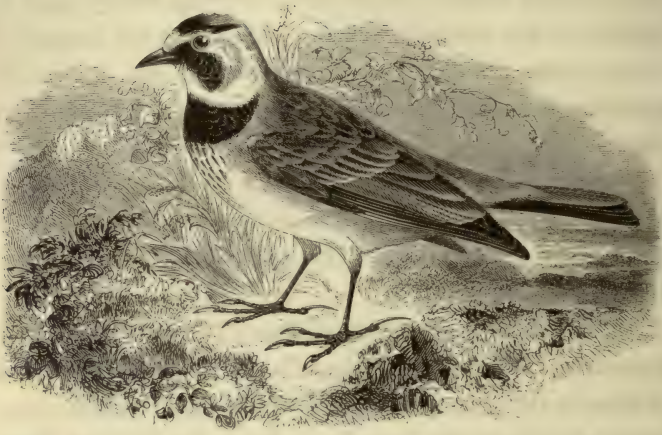
The whole length of the male bird is seven inches and three-quarters. From the carpal bone to the end of the longest primary quill-feather, three inches and five-eighths; the first four feathers of the wing are very nearly equal in length, but the first is rather the longest, and the three next in succession are each a very little shorter than that which precedes it; the fifth feather is a quarter of an inch shorter than the fourth.

These birds exhibit the green tinge on the upper surface, and the reddish colour over the breast and flanks observed periodically in other Pipits; but the females are less rufous than the males.

The vignette at the foot of page 426 represents, of the natural size, the feet of the four British species of the genus *Anthus*, in the order in which they have been described here, —namely, No. 1, the Tree Pipit, No. 2, the Meadow Pipit, No. 3, the Rock Pipit, and No. 4, Richard's Pipit, and considerable modifications prevail in each: here, however, the alteration in the form of the hind claw is accompanied by a difference in the manners of the birds, witness the arboreal habits in connection with the short hind claw of the first, the Tree Pipit, and the decided terrestrial habits in conjunction with the elongated hind claw in the last, or Richard's Pipit. Mr. Vigors some years ago suggested the propriety of removing Richard's Pipit from the genus *Anthus*, and proposed for it the term *Corydalla*, but this distinction has not, that I am aware, been adopted by systematic writers.

INSESSORES.
CONIROSTRES.

ALAUDIDÆ.



THE SHORE LARK.

Alauda alpestris.

Alauda alpestris, Shore Lark, Jenyns, Brit. Vert. p. 126.
" " " " Gould, Birds of Europe, pt. vii.
" " " " Eyton, Rarer Brit. Birds, p. 15.
" " *Alouette à hausse-col noir,* Temm. Man. d'Ornith. vol. i. p. 279.

Alauda. *Generic Characters.*—Beak short, subconic, mandibles of equal length, the upper one convex, and slightly curved. Nostrils basal, oval, partly covered by small feathers directed forwards. Head furnished on the top with a few elongated feathers, capable of being elevated, and forming a crest. Wings rather long; the first quill-feather generally very short, the second rather shorter than the third, which is the longest in the wing. Feet with three toes before, divided to their origin; one toe behind with the claw elongated, and almost straight.

With the Larks commences the second division of the Second Order of Birds, the Conirostres, a distinction drawn from the conical form and great strength of the beak. Many of the birds of this division live almost entirely on grain; others are less limited in the nature of their food; but so great is the power of the beak in some of the species included in this division, that they are enabled to break down the hardest seeds, and even to crack the stones of various fruits, by which they obtain the highly-flavoured kernels within. The arrangement of the genera and species will exhibit a gradual increase in the size of the mandibles till the maximum of power is attained.

In the year 1831, I learned of my late friend, Mr. John Sims, then residing at Norwich, that a British-killed specimen of the Shore Lark, the *Alauda alpestris* of authors, had come into his possession. The bird was shot on the beach at Sherringham in Norfolk in March 1830, it was preserved by Mr. Sims, and is now in the collection of Edward Lombe, Esq., of Great Melton, near Norwich, the possessor of one of the most complete and perfect collections of British Birds.

A second example of this species, according to the testimony of Thomas Eyton, Esq., has been killed in Lincolnshire; and I have heard of a pair that were obtained together on an extensive down in Kent, the male only of which, being the more showy and attractive bird, was preserved.

The Shore Lark inhabits the northern parts of Asia, Europe, and America; but appears to be more plentiful on the continent of North America than elsewhere; and detailed accounts of its habits and geographical range will be found in the valuable works of Wilson, Dr. Richardson, and Mr. Audubon.

Wilson says the Shore Lark visits the United States in winter, going as far south as Georgia. Mr. Audubon says, these birds in severe weather are seen in Massachusetts as early as October: but seldom proceed on the Atlantic side beyond Maryland, or the lower parts of Kentucky, west of the Alleghany mountains, and he saw but one in Louisiana. Pennant, in his Arctic Zoology, states that in very severe weather these birds reach Virginia and Carolina. Mr. Bullock found them on the table-land of Mexico.

Pursuing our bird in North America, Dr. Richardson says, that it "arrives in the fur-countries along with the Lapland Bunting, with which it associates, and being a shyer bird, is the sentinel, and alarms the flock on the approach of danger. It retires to the marshy and woody eastern districts to breed, extending its range to the shores of the Arctic Sea. Mr. Hutchins states that its nest is placed on the ground, and that it lays four or five white eggs, spotted with black." They appear on the shores of Hudson's Bay in May, and proceed from thence still further north to breed. We are indebted to Mr. Audubon for the best account of the habits of this bird during summer, the most interesting period of its existence. In one of those arduous voyages which this indefatigable naturalist undertook to complete his Ornithological Biography of North America, this bird was found on the shores of the coast of Labrador, and its various peculiarities are thus described.*

"Although in the course of our previous rambles along the coast of Labrador, and among the numberless islands that guard its shores, I had already seen this Lark while breeding, never before that day did I so much enjoy its song, and never before I reached this singular spot, had I to add to my pleasures that of finding its nest. Here I found the bird in the full perfection of plumage and song, and here I had an opportunity of studying its habits, which I will now endeavour to describe."

"The Shore Lark breeds on the high and desolate tracts of Labrador, in the vicinity of the sea. The face of the country appears as if formed of one undulated expanse of granite, covered with mosses and lichens, varying in size and colour, some green, others as white as snow, and others again of every tint, and disposed in large patches or tufts. It is on the latter that this Lark places her nest, which is disposed with so much care, while the moss so resembles the bird in hue, that unless you almost tread upon her as she sits, she seems to feel secure, and remains unmoved. Should you, however, approach so near, she flutters away, feigning lameness so cunningly, that none but one accustomed to the sight can refrain from pursuing her. The male immediately joins her in mimic wretchedness, uttering a note so soft and plaintive, that it requires a strong stimulus to force the naturalist to rob the poor birds of their treasure."

---

* Ornithological Biography, vol. ii. p. 570.

"The nest around is imbedded in the moss to its edges, which is composed of fine grasses, circularly disposed, and forming a bed about two inches thick, with a lining of Grouse feathers, and those of other birds. In the beginning of July the eggs are deposited. They are four or five in number, large, greyish, and covered with numerous pale blue and brown spots. The young leave the nest before they are able to fly, and follow their parents over the moss, where they are fed about a week. They run nimbly, emit a soft *peep*, and squat closely at the first appearance of danger. If observed and pursued, they open their wings to aid them in their escape, and, separating, make off with great celerity. On such occasions it is difficult to secure more than one of them, unless several persons be present, when each can pursue a bird. The parents all this time are following the enemy overhead, lamenting the danger to which their young are exposed. In several instances, the old bird followed us almost to our boat, alighting occasionally on a projecting crag before us, and entreating us, as it were, to restore its offspring. By the first of August many of the young are fully fledged, and the different broods are seen associating together to the number of forty, fifty, or more. They now gradually remove to the islands of the coast, where they remain until their departure, which takes place in the beginning of September. They start at the dawn of day, proceed on their way south at a small elevation above the water, and fly in so straggling a manner, that they can scarcely be said to move in flocks."

"This species returns to Labrador and the adjoining islands in the beginning of June. The males are then so pugnacious and jealous of their females, that the sight of one of their own sex instantly excites them to give battle; and it is curious to observe, that no sooner does one of these encounters take place, than several other males join in the fray. They close, flutter, bite, and tumble over, as the European Sparrow is observed to do on similar occasions. Several times while in Labrador, I took advantage of their pugnacious disposition, and procured two or three individuals at a shot, which it is difficult to do at any other time. Several pairs breed in the same place, but not near each other. The male bird sings sweetly while on wing, although its song is comparatively short. It springs from the moss or naked rock obliquely for about forty yards, begins and ends its madrigal, then performs a few irregular evolutions, and returns to the ground. There also it sings, but less frequently, and with less fulness. Its call-note is quite mellow, and altered at times in a ventriloqual manner, so different, as to seem like that of another species. As soon as the young are hatched, the whole are comparatively mute, merely using the call-note. Only one brood is reared each season. The food of the Shore Lark consists of grass seeds, the blossoms of dwarf plants, and insects. It is an expert catcher of flies, following insects on wing to a considerable distance, and now and then betaking itself to the sea-shore to search for minute shell-fish or crustacea."

Captain James Ross, in his Appendix to the Narrative of the Second Voyage of Sir John Ross to the Arctic Regions, says, "One Shore Lark shot by us near Felix Harbour, agreed well with the descriptions of authors. Two others were all that were seen by us; it is therefore but rarely met with above the seventieth degree of latitude."

The adult male has the beak bluish horn colour, almost black; the irides hazel; the lore, or space between the beak and the eye, and the cheeks, black; the ear-coverts, and a streak over the eye, yellow; the forehead also yellow, bounded on the top of the head by a broad black transverse band, which ends on each side with a few elongated and pointed black feathers, these the birds can elevate at pleasure; the occipital portion of the head, the nape, back, and upper tail-coverts, hair brown, the central line of the feathers being darker than the edges; the back of the neck and the smaller wing-coverts tinged with red, the latter tipped with white; the greater wing-coverts and tertials dark brown, with light brown margins; wing-primaries and secondaries dark brown, with very narrow light-coloured edges; the two centre tail-feathers dark brown, with light brown margins; the others pitch black, except part of the edge of the outer web of the outside feather on each side, which is white; chin, throat, and sides of the neck, primrose yellow; upper part of the breast with a gorget of black; the lower part of the breast, the belly, and under tail-coverts, dull white; flanks tinged with reddish brown; legs, toes, and claws, bluish black, the hind claw straight, and longer than the toe. This is the plumage of autumn. In winter, the black on the crown of the head, on the cheeks and chest, becomes dusky brown. In summer, Mr. Audubon says, the brownish black bands on the head and neck become deep black; the throat and frontal band white, and the upper parts of the body light brownish red.

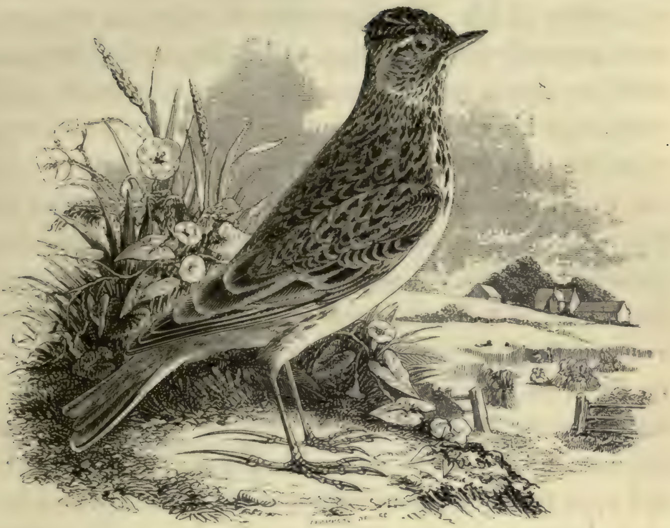
A female, killed on Lake Superior, described by Dr. Richardson, "wanted the black horned mark, and also the vinacious tint of the head, neck, and shoulders of the male, these parts being coloured like the back; the eye stripe, and under surface of the head lemon yellow, and there was a narrow black band fringed with yellow on the upper part of the breast. The rest of the plumage nearly as in the male; her dimensions a little smaller."

The young males of the year, after their first autumnal moult, resemble the adult female.

The whole length of an adult male about seven inches. From the carpal joint to the end of the quill-feathers four inches and one quarter: the first three quill-feathers very nearly equal in length, and the longest in the wing; the first feather a little longer than the third; the fourth quill-feather a quarter of an inch shorter than the third.

This pointed form of wing affords great power of flight, and may help to account for the very extended geographical range of this species.

INSESSORES. *ALAUDIDÆ.*
CONIROSTRES.



THE SKY LARK.

Alauda arvensis.

Alauda arvensis,	*Sky Lark,*	Penn. Brit. Zool. vol. i. p. 475.
,, ,,	,, ,,	Montagu, Ornith. Dict.
,, ,,	,, ,,	Bewick. Brit. Birds, vol. i. p. 216.
,, ,,	*Field Lark,*	Flem. Brit. An. p. 79.
,, ,,	*Sky* ,,	Selby, Brit. Ornith. vol. i. p. 273.
,, ,,	,, ,,	Jenyns, Brit. Vert. p. 127.
,, ,,	,, ,,	Gould, Birds of Europe, pt. xix.
,, ,,	*Alouette des champs,*	Temm. Man. d'Ornith. vol. i. p. 281.

The Sky Lark is so abundant as a species, so universal a favourite, and its various qualities are so well understood and appreciated, as to require little more than a general reference here to the points of greatest interest in its history. It is an inhabitant of most, if not all, the countries of Europe, but prefers cultivated districts, particularly uninclosed arable land. Here in early spring its cheerful and exhilarating song, fresh as the season, is the admiration of all. The bird rises on quivering wing, almost perpendicularly, singing as he flies, and gaining an elevation that is quite extraordinary, yet so powerful is his voice, that his wild, joyous notes, may be heard distinctly when the pained eye can trace his course no longer. An ear well tuned to his song can even then determine by the notes whether the bird is still ascending, remaining stationary, or on the descent. When at a considerable height, should a Hawk appear in sight, or the well-known voice of his mate reach his ear, the wings are closed, and he drops to the earth with the rapidity of a stone. Occasionally the Sky Lark sings when on the ground; but his most lively strains are poured forth during flight; and even in confinement, this would-be tenant of the free air tramples his turf and flutters his wings while singing, as if muscular motion was with him a necessary accompaniment to his music.

The male Sky Lark is one of our most common cage-birds, from the facility with which he is preserved in health under confinement, and the general sprightliness of his song; yet the notes of the Lark are more remarkable for variety and power than for quality of tone; what is wanted in quality is, however, made up by quantity; his strains are heard during eight months of the year; and in summer, Mr. Jenyns observes, he begins to sing soon after two o'clock in the morning, and continues with little intermission till after sunset.

An instance has lately come to my knowledge of a Sky Lark that lived nineteen years and a half in a cage.

The food of the Sky Lark is grain, seeds of grasses, various insects, and worms. They pair in April, and generally produce two broods in the summer. The nest is placed on the ground, frequently sheltered by a tuft of herbage, or a clod of earth. Grahame, in his poem on the Birds of Scotland, has well contrasted the lowly situation of the nest with the lofty flight of the builder:

> "Thou, simple bird, dwellest in a home
> The humblest; yet thy morning song ascends
> Nearest to Heaven."

The materials of which the nest is formed, as well as the locality frequently selected for it, are in the same poem thus truly described:

> "The daisied Lea he loves, where tufts of grass
> Luxuriant crown the ridge; there, with his mate,
> He founds their lowly house, of withered bents,
> And coarsest spear-grass; next, the inner work
> With finer, and still finer fibres lays,
> Rounding it curious with his speckled breast."

The eggs are four or five in number, of a greyish white ground tinged with green, and mottled nearly all over with darker grey and ash brown; the length eleven lines, by eight lines and a half in breadth: the young are hatched in about fifteen days. Mr. Selby says, that the young of the first brood are fledged by the end of June, and the second brood are able to fly in August. The strong attachment of the parent Lark to its eggs and young has long been known, and a remarkable instance is thus described by Mr. Blyth in the second volume of The Naturalist. "The other day some mowers actually shaved off the upper part of the nest of a Sky Lark without injuring the female, which was sitting on her young; still she did not fly away, and the mowers levelled the grass all round her without her taking further notice of their proceedings. A young friend of mine, son of the owner of the crop, witnessed this; and about an hour afterwards went to see if she was safe, when, to his great surprise, he found that she had actually constructed a dome of dry grass over the nest during the interval, leaving an aperture on one side for ingress and egress, thus endeavouring to secure a continuance of the shelter previously supplied by the long grass." Two or three instances are recorded of the Sky Lark moving its eggs under the fear of impending danger; and Mr. Jesse, in the fourth edition of his Gleanings, adds the following communication made to him by a clergyman in Sussex, who during a previous harvest "was riding gently towards Dell Quay, in Chichester Harbour, with two friends; when having passed the toll-bar, the road is of good elevation, and separated by a short quickset hedge on each side from the fields, over which there was a commanding view. When in this situation, their attention was attracted by a shrieking cry, and they discovered a pair of Sky Larks rising out of the stubble; and crossing the road before them at a slow rate, one of them having a young bird in its claws, which was dropped in the opposite field at a height of about thirty feet from the ground, and killed by the fall. On taking it up it appeared to have been hatched about eight or nine days. The affectionate parent was endeavouring to convey its young one to a place of safety, but its strength failed in the attempt."

Mr. W. P. Foster, surgeon of Church-street, Hackney, has for some years kept twelve or fifteen pairs of our smaller singing birds together in an aviary, where they appear in excellent health and plumage, repaying the care and attention bestowed upon them by pursuing the round of their various interesting habits,—the song, the courtship, the nest-building, and feeding their young, within five or six feet of the window, outside which the aviary is constructed, and through which window, when open, many of them come into the room to him. The degree of perfection with which they are managed, and the total absence of any influence of fear or restraint on their habits, may be learned by the fact that in the summer of 1836, a pair of Sky Larks produced four sets of eggs; in 1837 the same pair produced three sets of eggs, and reared some of their young; and this year, three females had, each of them, a nest and eggs. The materials for building are sought for and carried by the male bird to the spot selected for the intended nest, near which the female remains to assist in arranging them. During the period of producing the eggs, the female has occasionally been heard to sing with a power and variety of tone equal to the voice of her mate. The male Sky Lark, though at other times timid, is, while his female is sitting, bold and pugnacious; driving every other bird away that ventures too near his charge, both watching and feeding her with unceasing solicitude. To supply the quantity of insect food necessary during summer, the maggots of the flesh-fly, and the beetle, so common in most kitchens, are principally resorted to.

Sky Larks constantly dust themselves, appearing to take great pleasure in the operation, shuffling and rubbing themselves along the ground, setting up their feathers, and by a peculiar action of the legs and wings throwing the smaller and looser portions of the soil over every part of their bodies. This is supposed to be done in order to rid themselves of small parasitic insects. Many ground birds, such as Quails and Partridges, are observed to be inveterate dusters, their terrestrial habits probably exposing them to the constant attacks of minute but very troublesome visitors. From the number of male Sky Larks sold for cage birds, and the sum obtained for them,—twelve or fifteen shillings being a common price for a good bird,—various means are practised to entrap them. Though living in pairs during summer, Sky Larks are gregarious in winter, assembling in vast flocks on the open country, where thousands are taken for the table by dragging a net over the stubbles, and other short cover, among which the poor birds shelter themselves. At this time they are in excellent condition, even during severe frost, the low temperature of the season probably checking cutaneous transpiration, and inducing a deposit of fat; but should a fall of snow cover the ground, their condition is altered for the worse in a few days. It appears from the following remarks of Mr. Woolnough, of Hollesley, on the coast of Suffolk, that these birds frequently migrate into this country from the Continent in autumn.* "I have frequently seen them come flying off the sea; not in one year, but on several, and for many hours on the same day, from five and ten, to forty and fifty in a flock. This I once observed in November for three days in succession: our fields were then covered with Larks, to the great destruction of the late sown wheat." The Rev. Richard Lubbock, among other notices of the birds of Norfolk with which he has favoured me, says, "I can entirely corroborate the migration of these birds to our coast in the autumn, as mentioned in the Linnean Transactions. On Eaistor Point, near Yarmouth, I have more than once witnessed the arrival of Larks from the sea, precisely as there described." During severe weather in winter, large flocks of Larks are observed in some inland counties, and particularly in the southern counties, of England, flying to the westward.

---

* Linn. Trans. vol. xv. p. 22.

The Sky Lark is universally distributed over the British Islands, but in severe weather in winter, accompanied with snow, a large portion leave Scotland in flocks to come southward. In Orkney and Shetland it is only a summer visitor, according to Mr. Dunn, retiring to a more southern latitude on the approach of winter. It is a common bird in Denmark, Sweden, and Norway, during summer, and a few remain in winter; but the greater part migrate southwards. The Sky Lark does not appear to visit the Faroe Islands, Iceland, or Greenland. M. Temminck says it inhabits Siberia, Russia, and Western Asia. It is universal over the European continent to the shores of the Mediterranean, and inhabits also Corfu, Sicily, Malta, the Morea, the shores of the Black Sea, Smyrna, and North Africa. Mr. H. E. Strickland when at Smyrna, says, "immense flocks of this bird arrived from the northward at the commencement of the severe weather at Christmas 1835."

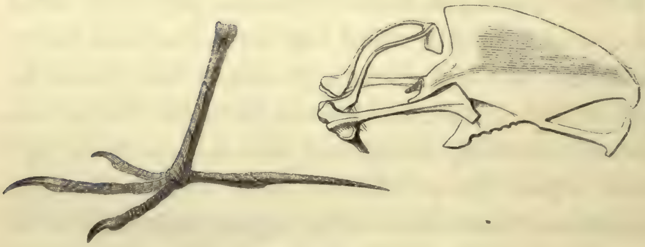
The beak is dark brown above, pale yellow brown at the base of the lower mandible; irides hazel; the feathers on the top of the head are elongated, forming a crest, which the bird elevates at pleasure; in colour they are dark brown, with pale brown edges; the nape, back, wings, and upper tail-coverts, varied with three shades of brown, the darkest of which occupies the longitudinal line of the shaft of each feather, and the margin of the feather is the lightest; the wing-coverts and tertials have broad light brown edges; the quill-feathers dusky brown; the outer tail-feather on each side is white, with a longitudinal streak of brown on the inner web; the next tail-feather on each side is dark brown, with a longitudinal streak of white on the outer web; the rest dusky brown, with light brown edges; the throat and upper part of the breast are pale wood-brown, spotted with dark brown; belly and under tail-coverts pale yellowish white, tinged with brown on the thighs and flanks; the legs, toes, and claws, brown; the middle toe rather long; the claw of the hind toe very long, straight at the base and for half its length, then slightly curved.

The whole length of an adult male seven inches and a quarter. From the carpal joint to the end of the wing four inches and a half; the first feather short, the second shorter than the third, which is the longest in the wing.

The female is a little smaller than the male, and rather darker in colour.

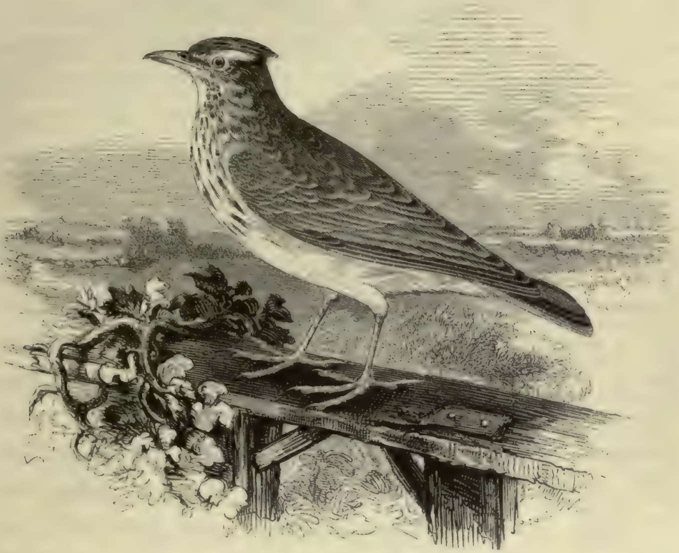
Broad edgings to the great wing-coverts, and a black spot with a white tip at the lanceolate ends of the smaller coverts, bespeak the young bird; these markings are lost at the first moult, which begins in August.

The vignette below represents the breast-bone and the foot of the Sky Lark of the natural size.



INSESSORES.
CONIROSTRES.

ALAUDIDÆ.



THE CRESTED LARK.

Alauda cristata.

Alauda cristata, *Crested Lark*, Gould, Birds of Europe, pt. xix.
" " *Alouette cochevis*, Temm. Man. d'Ornith, vol. i. p. 277.

The following letter referring to the occurrence of this species in Ireland, appeared, with a characteristic figure, in the Dublin Penny Journal of February 27th, 1836, vol. iv. No. 191, page 276, to the Editor—" Sir, in a shooting excursion a few weeks ago, I killed, near Taney, a curious species of Lark, of which the above is a sketch. The bird was about seven inches long, like the common Lark, *Alauda arvensis*, in form; but differing from it in having a longitudinal crest, consisting of ten feathers, in the form of a truncated cone, reclining backwards. Its head and bill were rather large in proportion to its size. The latter was of a horny white, (colour) and slightly curved at the end. A band, darker than the colour of the breast, ran round the throat, and joined the rufous brown of the back. The general colour of its breast and belly was a dusky white, mottled with brown ; the wing-feather edged with white and rufous. Its tail was long, and consisted of twelve stiff feathers, edged with a whitish yellow. Its hind toe and nail were remarkably long. I searched the Naturalist's Cabinet, and the Zoological Journal, in vain, for a description of this little bird. When not looking for it, however, I accidentally met with one in Buffon. He describes it under the name of 'Le Cochevis ou la grosse alouétte huppée,' as well as its specific designation of '*Alauda cristata.*' He mentions it as an inhabitant of Italy, France, Germany, Poland, and Scotland ; but does not say that it is found in England or Ireland, yet I am convinced I have frequently met them in the furrows and meadows of Dublin. (Signed) W. R."

Since the publication of this notice a specimen has been killed in Sussex, and by the kindness of the gentleman who now possesses it, I am enabled to give a figure and description from this example.

When publishing his fine work on the Birds of Europe, Mr. Gould was not aware that any record existed of the occurrence of this species in the British Islands, and remarks that "this is the more singular as from the circumstance of the Crested Lark extending its range to many parts of the coast which are opposite our own, and from its being particularly common in the fields and plains round Calais, it might pass and repass to Dover at will.

Our personal observation of this bird while on the Continent, leads us to regard it as a much more solitary bird than the Sky Lark, to which in its general aspect it bears a close resemblance. The Crested Lark is said to congregate in flocks occasionally; but when we observed them they were scattered over the country in pairs, very frequently in the vicinity of the main roads."

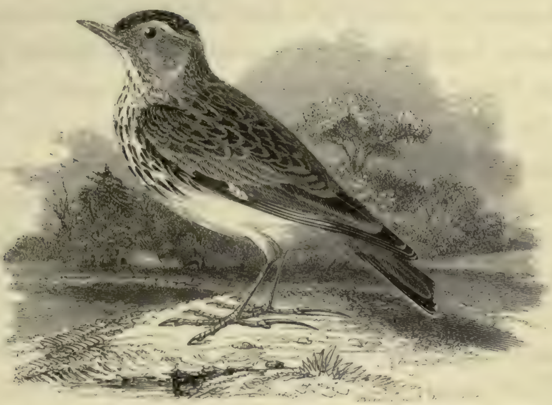
Pallas describes this species as visiting Siberia and Russia in summer, and M. Nilsson includes it with a good coloured figure in his Fauna of Scandinavia. Buffon speaks of it, as before mentioned, as inhabiting Poland; and it is included by various authors among the birds of Germany. It is rare in Holland and Belgium, seen in the latter named country about October on its passage south. M. Vieillot says "it is resident all the year in France, and frequently shows itself about the entrance of villages, or on low walls or coverings of low houses. Its song is sweet and agreeable, and is continued till the month of September. The female makes her nest on the ground in cultivated fields, it is constructed very like that of the Sky Lark, and she deposits four or five eggs of a light ash colour, spotted with light and dark brown." They feed on insects of various sorts, worms, and grain, and the writer remembers when travelling some years since from Calais to Paris, seeing one or two of these birds occasionally picking, like our sparrows, at the horse-dung dropped in the road, flying off, on the approach of a carriage, to the road-side, settling on the foot-path or perching on any low rail till the vehicle had passed, and then returning to renew their search.

The Crested Lark is found in Switzerland, Italy, Turkey, Greece, and Asia Minor; it is found also in Spain, North Africa, Sicily, Crete, and in Egypt.

The beak of the Crested Lark is thicker, stronger, and more curved than that of the Sky Lark, brown along the ridge and at the point, but paler on the sides and at the base; the crown of the head reddish brown, with a few feathers elongated, forming a crest and pointing backwards; irides hazel; from the eye passing over the ear-coverts a streak of buffy white; ear-coverts and back of the neck dark brown; back, wing-coverts and wings brown, the shaft and central portion of each feather dark brown; the wing-coverts and tertials edged with buffy white; the two middle tail-feathers nearly uniform light brown; the outer tail-feather on each side light brown, with a buffy-white outer margin; the other tail-feathers dark brown. The chin white; neck in front, breast and under parts pale yellow brown; the breast and flanks streaked with darker brown; legs, toes, and claws, pale brown. The whole length of the bird six inches and three-quarters; length of wing from the anterior bend to the end of the second quill-feather, which is the longest, four inches and one-eighth; length of beak along the ridge seven lines; the tarsus one inch; the hind toe and claw nine lines.

Mr. Gould mentions that the females of this species are smaller than the males, and have a shorter crest.

INSESSORES. *ALAUDIDÆ.*
CONIROSTRES.



THE WOOD LARK.

Alauda arborea.

Alauda arborea,	*Wood Lark,*	Penn. Brit. Zool. vol. i. p. 479.
„ „	„ „	Montagu, Ornith. Dict.
„ „	„ „	Bewick, Brit. Birds, vol. i. p. 227.
„ „	„ „	Flem. Brit. An. p. 79.
„ „	„ „	Selby, Brit. Ornith. vol. i. p. 276.
„ „	„ „	Jenyns, Brit. Vert. p. 127.
„ „	„ „	Gould, Birds of Europe, pt. xix.
„ „	*Alouette lulu,*	Temm. Man. d'Ornith. vol. i. p. 282.

The Wood Lark is immediately distinguished from the Sky Lark by its smaller size, its shorter tail, and by a conspicuous light brown streak over each eye and ear-coverts. It is by no means so plentiful a species as the Sky Lark; and in some localities in this country, even of very considerable extent, it is not found at all. It prefers hedge-bound meadows, cultivated lands, and corn-fields, that are interspersed with copses, plantations, and small woods, and is seldom found on those open exposed tracts of country where the Sky Lark is most abundant. In some of its habits, also, the Wood Lark differs from its generic companion, particularly in that of singing while perched on the branch of a tree, which the other does not. Its voice has neither the variety nor the power of that of the Sky Lark; but is superior to it in quality of tone, and by many persons preferred on that account. There is also a plaintive character in its song, which is second only to that of the Nightingale, and, like that bird, it is said also to sing during warm summer nights. Several writers have heard this Lark sing sweetly even in the months of December and January; and as the season advances, being an early breeder, it is heard to advantage in March and April while wheeling in circles, and sometimes hovering

"High in air, and poised upon its wings,
Unseen the soft, enamour'd Wood Lark sings."

The nest is built upon the ground, under shelter of a low bush, or a tuft of grass; it is usually formed externally of coarse grass with some moss, lined with finer bents and a few hairs. The eggs are four or five in number, nine lines and a half in length by seven lines in breadth, of a pale reddish white ground, spotted and speckled with dull reddish brown; and as the eggs have been found as early as March, and as late as July, it is probable these birds produce two broods in the season; but as the young of the Wood Lark are in great request to bring up as cage-birds, the late attempts of this species to obtain a brood may sometimes be the consequence of previous disappointment. The family of the year, with the parent birds, keep together through their first winter, and are seldom seen in larger flocks. They feed on grain, seeds, insects, and worms.

Though not very numerous in any locality that I am acquainted with, the Wood Lark inhabits Sussex, Hampshire, Dorsetshire, Somersetshire, Devonshire, and a few in Cornwall; it is also found in Wales; is included by Mr. Templeton in his Catalogue of the Birds of Ireland; where, according to Mr. Thompson, it is resident in the counties of Down and Antrim, but is very partially distributed.

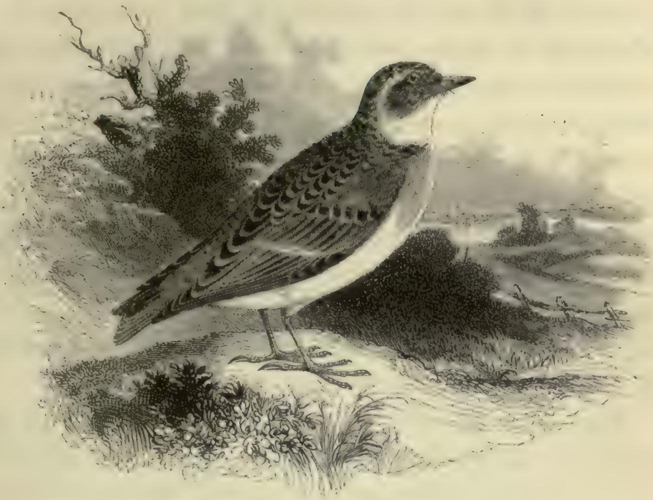
North of London, it is found in Suffolk, Norfolk, Lincolnshire, Yorkshire, Derbyshire, and Lancashire. Mr. Heysham mentions the capture of this bird near Carlisle as a very rare occurrence; but says that it is taken occasionally by bird-catchers in the vicinity of Dumfries. Mr. Selby considers it a very rare species in Northumberland. Sir Robert Sibbald and Dr. Fleming include it as a bird of Scotland, but no localities are named. It does not appear to visit the Orkneys or Shetland. In Denmark, Sweden, and Russia, it is a summer visitor only, appearing in March, and leaving those countries to go southward in September. In Germany, Holland, France, and thence to Italy, it is resident all the year; it is found at Corfu, Sicily, Malta, and Crete, and Mr. Strickland says it is common at Smyrna.

The upper mandible of the beak is dark brown, the lower one pale yellow brown; the irides hazel; over the eye and ear-coverts a pale brown streak; the feathers on the top of the head elongated, forming a crest, when elevated, of a light brown colour streaked with dark brown; the nape, back, wings, and upper tail-coverts, wood-brown, streaked on the neck and patched on the back with dark brownish black; quill-feathers dusky brown, tipped with light brown; tertials dark brown, edged with light brown; the outer tail-feather on each side pale brown, with a dark brown patch on the inner web; the two middle tail-feathers nearly uniform pale brown, all the other eight feathers brownish black, with a triangular spot of white at the tip: the form of the tail square at the end; the ear-coverts are brown; the throat, breast, belly, and under tail-coverts, pale yellowish brown, with a few small elongated spots of dark brown on the breast; legs, toes, and claws light brown; the hind claw straight, and half as long again as the hind toe.

The whole length of a male bird rather more than six inches. From the carpal joint to the end of the wing three inches and three-eighths: the first feather very short; the second not quite so long as the third, which is the longest in the wing; the fourth and fifth nearly as long as the second.

The female is rather smaller than the male, and has the spots on the breast more numerous.

INSESSORES. *ALAUDIDÆ.*
CONIROSTRES.



SHORT-TOED LARK.

Alauda brachydactyla.

Alauda brachydactyla, *Short-toed Lark*, GOULD, Birds of Europe, pt. xv.
" " *Alouette à doights courts*, TEMM. Man. d'Ornith. vol. i. p. 284, and vol. iii. p. 205.

AT the end of October 1841, I received a letter from Mr. H. Shaw, of Shrewsbury, informing me that an example of the Short-toed Lark had been caught in a net near that town on the 25th of that month; and shortly afterwards Mr. Shaw very obligingly sent the specimen up to me for my examination.

This species having some resemblance to our Woodlark, is yet immediately to be distinguished from it by its stouter beak; its nearly plain unspotted breast, and its very short hind toes and claws, from which latter peculiarities it has received its name. I am not aware that any other example of this species has been obtained in this country.

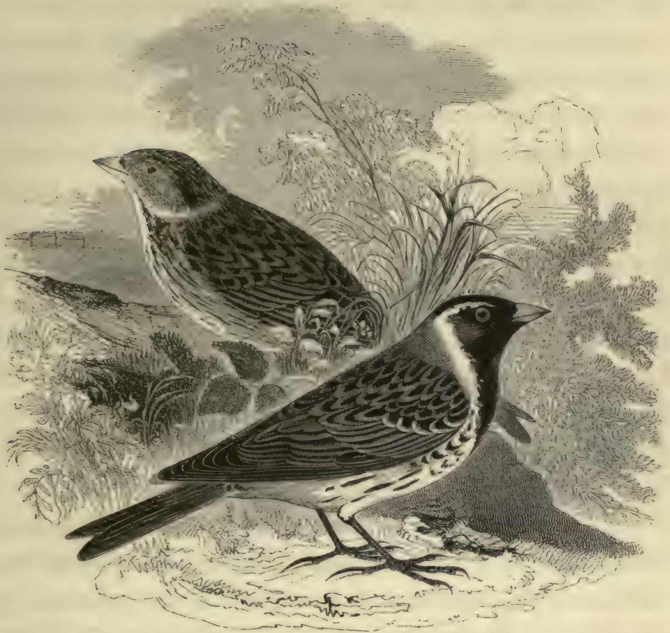
Large flocks of this Short-toed Lark are observed at Erzeroom in spring, and it is found also in Greece; according to M. Temminck, this bird is very abundant in Sicily, is found generally along the shores of the Mediterranean, in Spain, and in the southern and central parts of France. Pollidore Roux enumerates it as a bird of Provence; and M. Brehm includes it in his Birds of Germany, but this appears to be the usual boundary of its range northwards. It feeds on insects and seeds; makes its nest on the ground, and lays four or five eggs of dull yellow, or pale coffee colour, without any spots.

The male, Mr. Gould observes, "has the top of the head and all the upper parts of a yellowish, or sandy brown, with the centre of each feather darker; the quills and tail of a dusky brown, the two outer feathers of the latter having their external edges yellowish white; a whitish-yellow streak over each eye; throat and belly white; the chest and flanks being tinged with yellowish brown; bill and feet light brown. The sexes are not distinguishable by the colouring of their plumage; the tints of the female are, however, somewhat duller than those of the male. The young during the first autumn have the outer edges of each feather margined with buff.

The whole length of the Shrewsbury specimen was five inches and three-quarters; the tarsal bone three-quarters of an inch; the hind toe half an inch, the claw of it only one quarter of an inch; the wing, from the carpal joint to the end of the longest quill-feather three inches and a half; the second quill-feather the longest in the wing, the first and third feathers a little shorter; the tertials extend backwards as far as the end of the closed wing.

INSESSORES.
CONIROSTRES

EMBERIZIDÆ.



THE LAPLAND BUNTING.

Plectrophanes Lapponica.

Plectrophanes Lapponica,	*Lapland Lark Bunting,*	SELBY, Brit. Ornith vol. i. p. 283.
Æmberiza ,,	,, *Bunting,*	JENYNS, Brit. Vert. p. 128.
Plectrophanes ,,	,, ,,	GOULD, Birds of Europe, pt. x.
,, ,,	,, ,,	EYTON, Rarer Brit. Birds, p. 95.
Emberiza calcarata,	*Bruant montain,*	TEMM. Man. d'Ornith. vol. i. p. 322.

PLECTROPHANES. *Generic Characters.*—Beak short, thick, conical, the edges of both mandibles slightly curved inwards; upper mandible smaller than the lower, with a small palatal knob. Nostrils basal, oval, partly hidden by small feathers. Wings long and pointed; the first and second quill-feathers of nearly equal length, and the longest in the wing. Legs with the tarsi of moderate length; anterior toes divided, lateral toes equal in length, hind toe strong, claw elongated, and nearly straight.

The Lapland Bunting, though a native, as its name imports, of the most northern parts of Europe, and even of the Arctic Regions, has yet been taken on five different occasions in this country. The first was obtained in the London market, and was for some years in the possession of N. A. Vigors, Esq. M.P. passing afterwards, with his whole collection, by gift, to the Museum of the Zoological Society. The second was taken on the downs near Brighton, and is in my own collection. The third was taken a few miles north of London, and its capture made known by Mr. Gould. The fourth, caught near Preston in Lancashire, was selected from among a variety of other small birds in Manchester market, and is now preserved in the Manchester Museum. Each of these four examples exhibited the plumage of the least conspicuous bird in the back ground of the plate here given.

On the last day of September 1844, a fine adult male was caught in a net with some larks on the downs near Brighton: this specimen I have seen in the possession of Mr. William Borrer, jun.; it is in the plumage of summer as represented in the lower figure, but undergoing a slight change from the advance of the season.

Systematic writers in ornithology at the present day appear to agree that the natural situation of the species of the genus *Plectrophanes* of Meyer, is between the true Larks and the true Buntings: with several characters by which they are allied to the Buntings, the difference in the structure of the wing, their straight hind claw, their terrestrial habits, and their mode of progression on the ground by steps, and not by hopping, indicate their connexion with the Larks, in the nets with which all the five examples here recorded were caught in this country. M. Temminck, it will be observed by the quotation at the head of this article, has not adopted the genus *Plectrophanes* of Meyer, but has made two sections of the Buntings, *Emberiza*, the second of which contains the species ranged by others in the new genus *Plectrophanes*.

Pennant, in his Arctic Zoology, says the Lapland Bunting is found in Siberia, and near the Uralian chain. Towards winter a few migrate southward as far as Switzerland. M. Necker in his paper in the Transactions of the Natural History Society of Geneva, mentions that this bird had been taken occasionally with Larks in that vicinity.

M. Nilsson includes this bird in his Fauna of Scandinavia. It inhabits the Faroe Islands, Spitzbergen, Greenland, and Iceland in summer, and from thence westward to Hudson's Bay. Some stragglers are occasionally seen in the northern parts of the United States. Dr. Richardson, in the second volume of the Fauna Boreali Americana, says, " I never met this species in the interior of the fur countries during winter, and I suspect that its principal retreats in that season are on the borders of lakes Huron and Superior, and to the country extending to the westward on the same parallel. In the year 1827 it appeared on the plains at Carlton House, about the middle of May, in very large flocks, amongst which were many Shore Larks, *Alauda alpestris*, and a few individuals of *Plectrophanes picta*. During their stay of ten or twelve days they frequented open spots, where recent fires had destroyed the grass. They came to Cumberland House a few days later in the same season, and there kept constantly in the furrows of a newly-ploughed field. In the preceding year were seen, though in smaller flocks, in the vicinity of Fort Franklin, latitude 65½°, in the beginning of May; and the crops of those that were then killed were filled with the seeds of *Arbutus alpina*. They breed in moist meadows on the shores of the Arctic Sea. The nest, placed on a small hillock, among moss and stones, is composed externally of the dry stems of grass, interwoven to a considerable thickness, and lined very neatly and compactly with deer's hair. The eggs, usually seven, are pale ochre-yellow, spotted with brown." Captain James Ross, in the Appendix quoted in the history of the Shore Lark, says, the Lapland Bunting was " by no means numerous in the higher northern latitudes. A nest with five eggs was brought on board early in July 1830."

The adult male in spring and summer has the beak yellow, with the point black; irides hazel; the lore, or space between the base of the beak and the eye, the forehead, crown of the head, and occiput, velvet black, with a collar of bright chestnut on the nape of the neck and upper part of the back; the feathers of the back, wings, and upper tail-coverts, reddish brown at the edge, dark brown at the centre; the small wing-coverts edged with white; the greater coverts and tertials with a broad margin of red; quill-feathers blackish brown, with narrow light-coloured exterior margins; the tail-feathers also blackish brown, with reddish edges; the two outer feathers with a conical white spot at the end; the tail forked; the chin, cheeks, ear-coverts, throat, and breast, velvet black; behind the eye, and surrounding the ear-coverts, a streak of white which descends to the breast, bounding the black on the throat and breast; lower part of the breast, the belly, and under tail-coverts, dull white; sides of the breast and flanks spotted with black; legs, toes, and claws, pitch black; the hind claw almost straight.

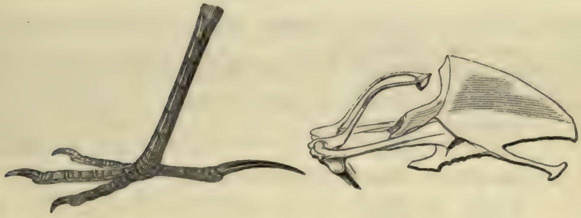
The whole length about six inches and a quarter. From the carpal joint to the end of the wing, three inches and a half: the first quill-feather the longest in the wing.

Dr. Richardson says, "the female differs in having the chin greyish; the black plumage of the head and breast edged with pale brown and grey, and the chestnut feathers of the nape fringed with white. The white stripes are duller."

"After the autumn moult the male resembles the female. The darker hue of the breeding dress is produced by the pale margins of the plumage dropping off."

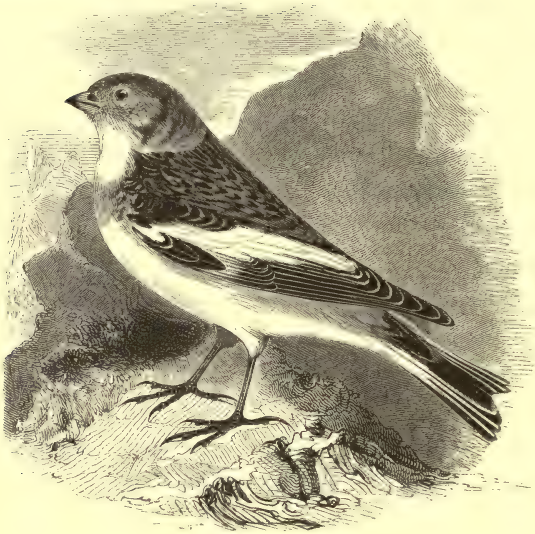
My own young bird has the beak brown; the whole of the plumage dark brown, with light brown edges; quill and tail-feathers brownish black; throat, breast, and all the under surface, pale brown, spotted with darker brown on the breast and flanks; legs, toes, and claws, light brown.

The vignette below represents the breast-bone and foot of the Lapland Bunting, *Plectrophanes Lapponica.*



INSESSORES.
CONIROSTRES.

EMBERIZIDÆ.



THE SNOW BUNTING.

Plectrophanes nivalis.

Emberiza	*glacialis,*	*Tawny*	*Bunting,*	Penn. Brit. Zool. vol. i. p. 442.
,,	*montana,*	*Mountain*	,,	,, ,, ,, 445.
,,	*nivalis,*	*Snow*	,,	Montagu, Ornith. Dict.
,,	*mustelina,*	*Tawny*	,,	,, ,,
,,	*montana,*	*Mountain*	,,	,, Supplt.
,,	*nivalis,*	*Snow*	,,	,, ,, and Appen.
,,	*glacialis,*	*Tawny*	,,	,, ,,
,,	*nivalis,*	*Snow*	,,	Bewick, Brit. Birds, vol. i. p. 181.
,,	*mustelina,*	*Tawny*	,,	,, ,, ,, 184.
,,	*nivalis,*	*Snow*	,,	Flem. Brit. An. p. 78.
Plectrophanes	,,	,,	,,	Selby, Brit. Ornith. vol. i. p. 279.
Emberiza	,,	,,	,,	Jenyns, Brit. Vert. p. 129.
Plectrophanes	,,	,,	,,	Gould, Birds of Europe, pt. v.
Emberiza	,,	*Bruant de neige,*		Temm. Man. d'Ornith. vol. i. p. 319.

Whatever differences of opinion might have existed formerly, it is now well ascertained that the Mountain, the

Tawny, and the Snow Bunting of authors, are only terms which refer to one and the same species under different states of plumage. Colonel Montagu in the Appendix to the Supplement of his Ornithological Dictionary, quotes a portion of a letter to himself from Mr. Foljambe,—an excellent practical ornithologist,—which first furnished to him a key to the true elucidation of the subject: the extract is as follows:—" A few years ago I shot more than forty from the same flock, during severe weather in the month of January, hardly any two of which exhibited precisely the same plumage, but varied from the perfect Tawny to the Snow Bunting in its whitest state; the feathers of those of the intermediate state being more or less charged with white."

The Snow Bunting may be generally considered as only a winter visitor to this country, and to the other temperate parts of Europe; a portion of the young birds of the year, bred in high northern latitudes, annually visiting our islands. It is only in severe weather, and late in the winter season, that the older birds make their appearance, the young birds always venturing farthest to the southward. The Snow Bunting is an inhabitant, during the breeding-season, of the Arctic Regions, and the islands of the Polar Sea. Captain Scoresby says it resorts to the shores of Spitzbergen in large flocks. It is included by Captain Sabine in his Birds of Greenland; and he says, also, that it was very numerous in the North Georgian Islands, where they were amongst the earliest arrivals. Captain James Ross, in his Appendix,—which has been frequently quoted, —says that it abounds in all parts of the Arctic Regions, from the middle or end of April to the end of September. Dr. Richardson states that this bird " breeds in the northernmost of the American islands, and on all the shores of the continent from Chesterfield inlet to Behring's Straits. The most southerly of its breeding stations in the New World, that has been recorded, is Southampton Island, in the sixty-second parallel, where Captain Lyons found a nest placed in the bosom of the corpse of an Esquimaux child. Its nest is composed of dry grass, neatly lined with deer's hair and a few feathers, and is generally fixed in the crevice of a rock, or in a loose pile of timber or stones. The eggs are greenish white, with a circle of irregular umber brown spots round the thick end, and numerous blotches of subdued lavender purple. On the 22nd July 1826, in removing some drift timber lying on the beach of Cape Parry, we discovered a nest on the ground containing four young Snow birds. Care was taken not to injure them; and while we were seated at breakfast, at the distance of only two or three feet, the parent birds made frequent visits to their offspring; at first timidly, but at length with the greatest confidence, and every time bringing grubs in their bills. The Snow Bunting does not hasten to the south on the approach of winter with the same speed as the other summer birds; but lingers about the forts and open places, picking up grass seeds, until the snow becomes deep; and it is only during the months of December and January that it retires to the southward of the Saskatchewan. It usually reaches that river again about the middle of February; two months afterwards it attains the sixty-fifth parallel of latitude, and in the beginning of May it is found on the coast of the Polar Sea. At this period it feeds upon the buds of the *Saxifraga appositifolia*, one of the most early of the Arctic plants; during winter its crop is generally filled with grass seeds. In the month of October, Wilson found a large flock running over a bed of water plants, and feeding, not only on their seeds, but on the shelly mollusca which adhered to the leaves; and he observes that the long hind claws of these birds afford them much support when so engaged. The young are fed with insects." Mr. Nuttall, in his Ornithology of the United States and Canada, says that on their way to the south these birds appear round Hudson's Bay in September, and stay till the frosts of November again oblige them to seek out warmer quarters. Early in December they make their descent into the Northern States in whirling, roving flocks, either immediately before, or soon after, an inundating fall of snow. The southern migration on the American continent extends as far to the south as Louisville in Kentucky.

Mr. William Proctor, the curator of the Durham University Museum, who visited Iceland in the summer of 1837, and has very kindly supplied me with several interesting notices of the habits of some of our birds on that island, says, "of the Snow Bunting it is observed, that this bird breeds there in June; the nest, placed among large stones, or in the fissures of rocks, is composed of dry grass, and lined with hair or feathers; the eggs from four to six in number. The male bird attends the female during incubation; I have often seen him, when he was coming from the nest, rise up in the air and sing sweetly, with his wings and tail spread like the Tree Pipit. I observed these Buntings frequently perch on some low railing which had been put up to dry fish on, even when fish were hanging on the rails."

Linnæus, in his Tour in Lapland, mentions having seen them in that country at the end of May, and in the beginning of July. At page 282 he observes that the *Emberiza nivalis* is said to be the only living animal that has been seen two thousand feet above the line of perpetual snow in the Lapland Alps. This bird breeds in Iceland, and on the Faroe Islands. Mr. Hewitson, in his notes on the Ornithology of Norway, printed in the Magazine of Zoology, says, "we saw the Snow Buntings in their beautiful plumage of black and white, and found a single nest with the young under some loose stones." In Sweden this bird inhabits the highest hills in summer, and valleys in winter. Muller includes it as a bird of Denmark. Dr. Neill, Dr. Fleming, and Mr. Dunn, mention the Snow Bunting as a winter visitor to Shetland and Orkney; and Dr. Fleming adds that in Zetland it is called Oatfowl, from the preference which it gives to that kind of grain.

Sir William Jardine, Bart. of Applegarth, Dumfriesshire, whose extensive acquirements in various branches of Natural History are so well known, has most liberally supplied me with valuable information from his own notes on the localities of our birds in Scotland; and under the head of the Snow Bunting, quoting from his communication, I find that this bird is common in Dumfriesshire during the winter, frequenting the sheep pasture lands, at an elevation of from fifteen hundred to two thousand feet, descending in severe weather to lower ranges. In very severe times it is shot on the banks of the Annan and in the Holm lands adjoining; is common on the Alpine ranges of the upper part of Tweed-dale, and always to be seen from the high road when travelling that country in winter; frequents the Pentland Hills, Portobello Sands, Middleton Muir at the head of Gala Water, and is said to be frequent in winter on all the sub-alpine ranges in the south of Scotland, descending to the shore in very severe weather.

We are indebted to Mr. Macgillivray for interesting observations on this species in the Hebrides, and also in Scotland: they are as follows: — "The earliest period at which, according to my note-books, I have observed the Snowflake in the outer Hebrides, was on Sunday the 28th of September 1817, on which day it is recorded that on the ridge between Maodal and Ronaval I saw a Snow Bunting; and in returning along the shore by the low hills of Drimafuind saw another. In another place, dated Luachar, in Harris, I find the following statement. "The Snow Bunting is frequently met on the hills in small flocks. I am told they are never seen in summer, nor have I ever met with them there beyond the end of April; yet the little flocks which I have often observed, were apparently family groups; nor do these birds appear in large congregations, such as we often see along the shores of Scotland or England. On the 4th of August 1830, being on the summit of Ben-na-muic-dui, the highest mountain in Scotland, I observed a beautiful male flitting about in the neighbourhood of a great patch of snow; it was also seen by Dr. Greville at the same time. Some days after, having descended from the top of Lochnagar, to its corry, along with Dr. Martin Barry, in quest of plants, I met with a flock of eight individuals, flying about among the blocks of granite. They were evidently a family, the male and female being easily distinguished from the young. It is therefore very probable that the Snowflake breeds on the higher Grampians; and perhaps in considerable numbers, although it is not likely that the vast flocks seen in the lower grounds in winter are exclusively of Scottish origin."

I may further add here, that Colonel Thornton in his Sporting Tour in the Highlands of Scotland, says, Snowflakes were seen upon the summit of a Ptarmigan mountain August 29th. Mr. Selby says, that "these birds generally arrive in the upland or mountainous districts about the middle or latter part of October in large flocks, which seem chiefly to consist of the young of the year, or Mountain Buntings, and of females, or young males, the Tawny Buntings, with a few adult males intermixed; which, at this period, having scarcely acquired their winter's livery, are in consequence nearer to the state of the tawny plumage. Afterwards, if the season should be severe, small flocks are seen, principally consisting of adult male birds in their winter's dress, but never in such numbers as those in the two states first mentioned. As the severity of the winter increases, they leave the heaths, where they have fed upon the seeds of various grasses, and descending to the lower grounds, frequent the oat-stubbles; and, if the snow lies deep, they approach to the coasts, where the influence of the sea-breeze soon exposes a sufficient breadth of ground to afford them subsistence. Their call-note is pleasing, and often repeated during their flight, which is always in a very compact body; and frequently before settling on the ground they make sudden wheels, coming almost in collision with each other, at which time a peculiar guttural note is produced. They run with ease and celerity, like the Lark genus, and never perch on trees."

These flocks, diminished by separation and other causes, are seen in Yorkshire, Norfolk, and Suffolk, sometimes on open heaths and warrens, at others in the marshes and fields contiguous to the coast. A few reach the southern counties, and have been seen from Sussex to Devonshire. They are considered rare in Cornwall, have been noticed in Worcestershire; and Mr. Thompson writes me word they are winter visitants to the mountainous parts of the North of Ireland.

On the Continent they annually visit the north of Germany, France, and Holland. In the latter country, M.

Temminck states them to be very abundant, particularly by the sea-side, a partiality evinced by them in our own country. In Austria, Pennant says, they are caught and fed with millet, and like the Ortolan Bunting, grow excessively fat. Two instances are recorded in which this bird was taken as far south as Genoa, and once at Malta in 1840. From all the southern districts, on the approach of spring, they again return to the northern latitudes from whence they came.

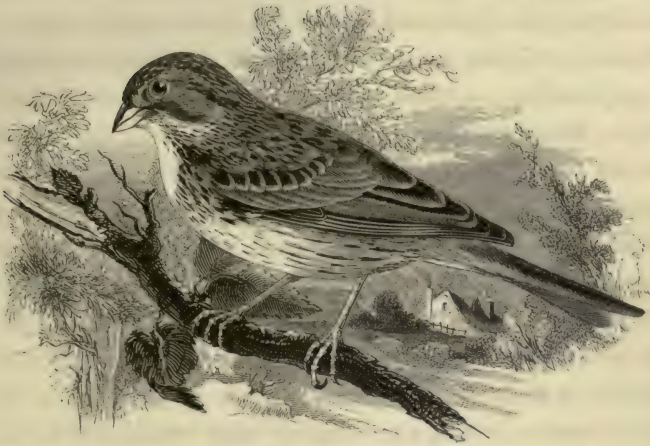
An adult bird, on its arrival here towards winter, has the beak yellow, the tip almost black; irides hazel; top of the head and the ear-coverts reddish brown; the feathers on the back black at the base, with broad ends of pale reddish brown; wing-coverts and tertials white; the spurious wing, primaries, and secondaries black, with narrow white tips and external edges; upper tail-coverts tawny and white; three outer tail-feathers on each side white, tipped with black; the others black, edged with white; all the under surface of the body dull white, tinged with reddish brown on the breast and flanks; legs, toes, and claws, black; the hind claw elongated and almost straight. In this state it has been called the Tawny Bunting. In summer the brown tips of the feathers on the back having fallen off, leave that part black; the want of the rusty brown on the head and breast leave those parts white; in this state it is called the Snow Bunting; and an example in this its fine white summer plumage, was killed at Royston in Hertfordshire, on the 22nd of May 1840. This specimen was given to me by my friend Thomas Wortham, Esq. on whose grounds it was shot. In this state of plumage it is very rare, except in high northern latitudes. When presenting less white than the figure here given, it is a young bird in the state called the

Mountain Bunting. Of the young of the year in autumn, apparently unable to perform a long flight, and flitting from crag to crag, as already noticed, Mr. Macgillivray observes, that they seemed to resemble young females in their second plumage, but with more grey and less white.

The whole length of an adult bird about seven inches. From the carpal joint to the end of the first quill-feather, which is the longest in the wing, four inches and one quarter.

INSESSORES.
CONIROSTRES.

EMBERIZIDÆ.



THE COMMON BUNTING.

Emberiza miliaria.

Emberiza	*miliaria,*	*Common*	*Bunting,*	PENN. Brit. Zool. vol. i. p. 435.
"	"	"	"	MONTAGU, Ornith. Dict.
"	"	*The*	"	BEWICK, Brit. Birds, vol. i. p. 171.
"	"	*Common*	"	FLEM. Brit. An. p. 77.
"	"	"	"	SELBY, Brit. Ornith. vol. i. p. 268.
"	"	"	"	JENYNS, Brit. Vert. p. 130.
"	"	"	"	GOULD, Birds of Europe, pt. xiii.
"	"	*Bruant proyer,*		TEMM. Man. d'Ornith. vol. i. p. 306.

EMBERIZA. *Generic Characters.*—Beak conical, strong, hard, and sharp-pointed; the edges of both mandibles curving inwards; the upper mandible narrower and smaller than the under one, and its roof furnished with a hard, bony, and projecting palatal knob. Nostrils basal and round, partly hidden by small feathers at the base of the bill. Wings of moderate size; the first quill shorter than the third, which is the longest in the wing. Feet with three toes before and one behind, divided to their origin; claws rather long, curved, and strong.

THE COMMON BUNTING, is so called because it is the species of this genus that is almost universally known, is of frequent occurrence in many of the cultivated districts of this country, and remains here throughout the year; it is perhaps more numerous in the southern counties of England than elsewhere, and is most frequently observed about cornfields, whence one of its provincial appellations, that of Corn Bunting,—a name by which it is also known in Scotland. During spring and summer, this bird, the largest of the true Buntings, may be often seen perched on the upper branch in a tall hedge, or on the top of a low tree, uttering his harsh unmusical notes, which are sometimes continued while on wing as he flies from spray to spray. The nest is finished about the middle or towards the end of April; it is usually placed on or very near the ground, frequently sustained a few inches above it by the strength of the coarse herbage or tangled briers among which it is concealed. The nest is composed of straw and fibrous roots, mixed with some dry grass, and lined with hair. The eggs are four or five in number, of a reddish white, or pale purple red ground, streaked and spotted with dark purple brown; the length one inch by eight lines and a half in breadth.

The adult birds feed principally on grain and seeds, for the breaking down or shelling of which the palatal knob of the upper mandible, and the elevated cutting edges of the lower one, are admirably adapted; the young birds while nestlings are probably fed with insects and their larvæ. Mr. Gould mentions having seen the adult birds feeding on the common cockchaffer.

Though living in pairs during the spring and summer, this species become gregarious through autumn and winter, flying in flocks with Chaffinches, Sparrows, and other visitors to the farm-yard and barn-door for the sake of the grain to be there obtained. One destructive habit of this bird is thus described by the author of the Journal of a Naturalist. "It could hardly be supposed that this bird, not larger than a Lark, is capable of doing serious injury; yet I this morning witnessed a rick of barley, standing in a detached field, entirely stripped of its thatching, which this Bunting effected by seizing the end of the straw, and deliberately drawing it out, to search for any grain the ear might contain."

This bird generally roosts in thick bushes, particularly during the cold nights of winter; but many of them also pass the night on the ground in stubble fields, and are caught with Sky Larks in the nets employed for that purpose, and are brought with them to market for the use of the table. The general resemblance of this Bunting to the Sky Lark in the colour of its plumage, has given origin to another provincial name by which it is known, that of the Bunting Lark.

The Common Bunting is well known around London, and is also to be found in suitable localities in all the southern counties of England, from Sussex to Cornwall. Mr. Eyton says it is common in Shropshire and North Wales; and Mr. Thompson sends me word that it is common and indigenous to Ireland. North of London it is found in Suffolk and Norfolk, is more rare in some parts of Derbyshire, and is said not to be partial to rocky or mountainous countries; it occurs in Lancashire and Yorkshire; is included by Mr. Selby in his Catalogue of the Birds of Durham and Northumberland, and by Dr. Heysham in his Birds of Cumberland. Sir William Jardine, Bart., who has most kindly furnished me with notes on the localities of birds in Scotland, as noticed in the account of the Snow Bunting, last described, says of the Corn Bunting, as it is there called, that it frequents the lower straths, or broad valleys, and the holm lands, where there is an extent of flat surface bordering streams. At Annandale, in Dumfries-shire, frequent; and in a note to his edition of White's Selborne, Sir William Jardine states his belief that we receive a considerable number at the great general migration, at the commencement of winter, most probably from Sweden and Norway. Mr. William Macgillivray, of Edinburgh, mentions that it is common in the outer Hebrides, where it is called Sparrow. In this gentleman's recently published work, detailing the anatomical peculiarities, as well as describing minutely the external characters of a portion of our "British Birds, Indigenous and Migratory," it is stated that this Bunting is generally distributed, but not very common in some districts, preferring grass and corn fields to moors or mountain pastures. Mr. Selby observed it in the cultivated lower grounds of Sutherlandshire; and Mr. Low, Dr. Fleming, and Mr. Dunn, include it as a bird of Orkney and Shetland. It inhabits Denmark and Sweden, and remains there in considerable numbers during winter. It is found on the European continent from Russia to the Mediterranean, and is common in Corfu, Sicily, Malta, Crete, in the Morea, at Smyrna, and at Trebizond.

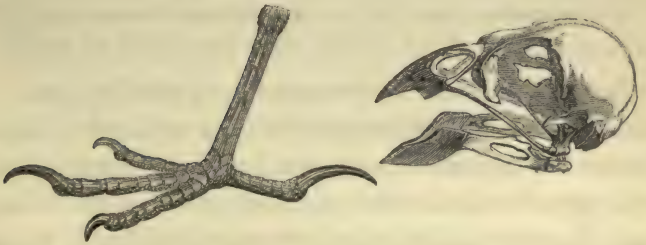
The upper mandible is small and dark brown, the lower one pale yellow brown; irides dark hazel; the head, neck, back, and upper tail-coverts pale hair-brown, streaked longitudinally with dark brown, the dark line occupying the centre of each feather; all the wing-coverts and tertials dark brown, broadly margined with pale wood brown; quill and tail-feathers dark brown, with lighter-coloured edges; tail slightly forked; chin, throat, breast, and all the under parts of the body dull whitish brown, marked on the sides of the neck and on the breast with conical spots of dark brown; the flanks marked with elongated lines of dark brown; legs, toes, and claws, pale yellow brown.

The whole length of the adult bird rather more than seven inches. From the carpal joint to the end of the wing three inches and three-quarters: the first quill-feather a little shorter than the second, the second a little shorter than the third, which is the longest in the wing; the fourth feather a little shorter than the first.

There is little or no difference in the plumage of the female to distinguish it from that of the male; and young birds of the year very soon acquire the appearance of their parents.

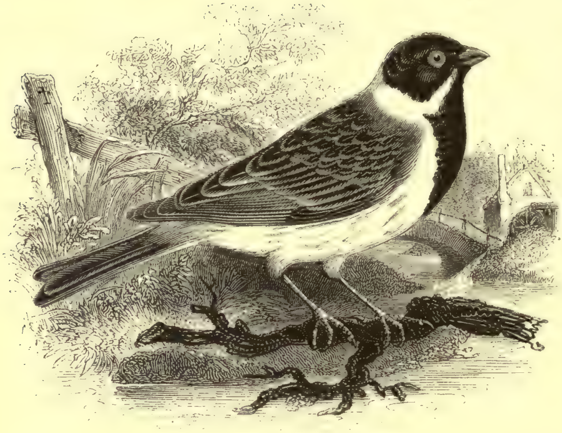
Varieties in colour of this species are not uncommon, and I possess one which in colour resembles a golden yellow canary.

The figures below represent the cranium and foot of the Common Bunting, in the former of which may be seen the palatal knob on the upper mandible, and the opposed cutting angle of the lower jaw, peculiar to the true Buntings.



INSESSORES.
CONIROSTRES.

EMBERIZIDÆ.



THE BLACK-HEADED BUNTING.

Emberiza schœniclus.

Emberiza	*schœniclus,*	*Reed Bunting,*	PENN. Brit. Zool. vol. i. p. 440.
„	„	„ „	MONTAGU, Ornith. Dict.
„	„	*Black-headed Bunting,*	BEWICK, Brit. Birds, vol. i. p. 179.
„	„	*Reed Bunting,*	FLEM. Brit. An. p. 78.
„	*schœniculus,*	„ „	SELBY, Brit. Ornith. vol. i. p. 290.
„	*schœniclus,*	„ „	JENYNS, Brit. Vert. p. 130.
„	*schœniculus,*	„ „	GOULD, Birds of Europe, pt. xiii.
„	„	*Bruant de roseau,*	TEMM. Man. d'Ornith. vol. i. p. 307.

THE BLACK-HEADED BUNTING, or Reed Bunting, as it is also called, is a well-known inhabitant of marshy places, the sides of lakes and large ponds, banks of rivers or canals, rush-grown water-meadows and beds of osiers, and though local from the partiality the bird exhibits to live in the vicinity of water, it is not a rare species in situations which accord with its habits, and it remains in this country throughout the year.

The contrast afforded by the black head of this bird as opposed to the white collar on the neck, and the varied colours of the back, give it an agreeable and inviting appearance, and it is accordingly a favourite with many. If suitable localities are visited, the male during the breeding season may be seen perched on a conspicuous spray, amusing his mate and himself with his song for an hour together; this consists of an interchange of two or three notes, which, however, have nothing particular to recommend them. His habit and his song are somewhat similar to those of the Common Bunting and the Yellow Bunting; but the song of the latter is perhaps a little better in quality of tone. The nest is generally placed on the ground among coarse long grass or rushes, at the foot of a thorn, or on the side of a canal bank; sometimes, but rarely, in a low bush, the nest being placed a short distance only above the ground, perhaps but a few inches. It is composed of a little moss with coarse grass, lined with finer grass and hairs. The nest of this bird has been described by some authors as made of grass, lined with the soft down of the reed, and suspended between four reed stalks, thus apparently referring to the nest of the Reed Warbler as figured at page 299; but by comparison it will be found that the nest of the Black-headed Bunting does not agree with that of the Reed Warbler either in materials or situation. The bird itself has also been stated to put forth a soft, melodious, warbling song, which is frequently heard in the night: this is a just estimate of the powers and habits of the Reed Warbler and the Sedge Warbler, but not of the Black-headed or Reed Bunting, and as the term *Reed* Bunting may have helped to induce and extend the confusion, it would probably be desirable to use in preference the name of Black-headed Bunting.

Both sexes of this bird endeavour to allure intruders from their nest. Mr. Salmon of Thetford says,* "Walking last spring amongst some rushes growing near a river, my attention was arrested by observing a Black-headed Bunting shuffling through the rushes, and trailing along the ground, as if one of her legs or wings were broken. I followed her to see the result; and she, having led me to some considerable distance, took wing, no doubt much rejoiced on return to find her stratagems had been successful in preserving her young brood; although not in preventing the discovery of her nest, containing five young ones, which I found was placed, as usual, on the side of a hassock, or clump of grass almost screened from view by overhanging dead grass. I have invariably found it in such a situation, and never suspended between reeds, as is sometimes stated: it was composed of dead grass, and lined sparingly with hair."

Mr. Neville Wood, in his British Song Birds, relates an occurrence with the Black-headed Bunting which indicates a still higher grade of intellectual character. It is thus described:—"Some years ago, when walking with a friend, I remember seeing two of these birds in an osier bed, the male perched erect at the summit of a willow stem, and his mate remaining beneath, or only occasionally coming within view. On our entering the osiers, they both flew around us in great alarm, mostly in silence, but sometimes uttering a low mournful kind of note, at the same time darting suddenly about the hedge and willow stems, as if impatient for our immediate departure; and their manners were so different from those commonly observed in the species, that we were convinced that there must be a nest thereabouts. I was well aware of the difficulty of finding its little tenement in a situation of that kind, and accordingly we both of us began to move in different directions, in order to discover by the actions of the birds where their treasure lay. My friend traversed one side of the osier bed, and myself the other; but still the loving and faithful couple remained in precisely the same spot where the junction of two hedge-rows formed a corner; and we therefore concluded, naturally enough, that in that spot all their hopes were centred. But a close and minute investigation of the whole corner, during which time we laid the ground completely bare, revealed nothing to us. At length, a full hour after the commencement of our labours, I hit upon the nest by mere chance, at exactly the opposite end to that at which the Reed Buntings had been, and still were, prosecuting their whinings and manœuvres, which now proved beyond a doubt, what I had never before suspected, that the birds had been all the time endeavouring to attract our attention towards them, instead of towards their nest."

---

* Loudon's Magazine of Natural History, vol. viii. p. 505, for the year 1835.

The eggs of this bird are four or five in number, of a pale purple brown colour, streaked with darker purple brown; the length nine lines and a half, and seven lines in breadth. Incubation commencing, Mr. Jenyns says, about the first week in May, and occasionally a second brood is produced in July. The food of the Black-headed Bunting is grain, seeds, insects, and their larvæ; the young are probably fed for a time on the latter. In winter these birds associate with others, forming flocks, and visiting gardens, barn doors, and stack-yards in search of seeds, or grain of any kind.

The Black-headed Bunting occurs in the localities suited to its habits in all the southern counties of England; it is common in Wales; and Mr. Thompson includes it as common and indigenous to Ireland. North of London it is also found in most, if not all, the counties as far as the Tweed. In Scotland it is common in the usual localities; has been observed in the Hebrides, and was seen by Mr. Selby upon the margins of all the lochs, and in the swampy districts of Sutherlandshire; but according to Dr. Fleming this bird does not visit Orkney or Shetland. It is only a summer visitor to Denmark, Norway, and Sweden, appearing in April and retiring in September; it is found also from Russia to Italy, being very abundant in Holland, as might be expected.

It is found at Corfu, Sicily, Malta, and Crete, inhabiting the marshes in summer and gardens or fields in winter.

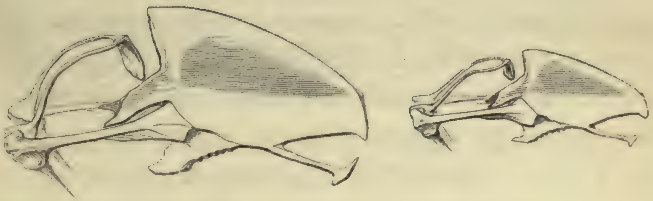
The beak is dusky brown above, paler beneath; irides hazel; head, cheeks, and ear-coverts, velvet black, bounded by a collar of white, which descends to the breast; from the angle of the gape a white streak passes backwards and falls into the white collar; back and wing-coverts black, each feather having a broad margin of rufous or bay; tertials black on the inner web, red on the outer, and margined with white; upper tail-coverts grey; the two outer tail-feathers on each side white, with a dusky brown patch at the base and tip; the central pair dark brown, margined with red, the others blackish brown; the tail slightly forked; chin and throat black, this colour ending in a point directed downwards; sides of the chest before each wing, breast, belly, and under tail-coverts, white, clouded and streaked on the sides and flanks with brown; legs, toes, and claws, brown. At the autumn moult in each year the new feathers of the head and throat are tipped with brown, which tips falling off in the following spring, leave these parts pure black.

The whole length of the male bird six inches. From the carpal joint to the end of the wing three inches: the first four quill-feathers nearly equal in length, but the second rather the longest; the fifth shorter than the first.

The female is rather smaller than the male: the head and ear-coverts reddish brown, varied with darker brown, over and behind the ear-coverts, and from thence passing forwards to the base of the under mandible, a pale yellowish brown streak; both sets of wing-coverts and the tertials broadly edged with rufous; on the chin upon each side a descending streak of dark brown; under surface of the body more clouded with brown than in the males; legs and toes pale brown.

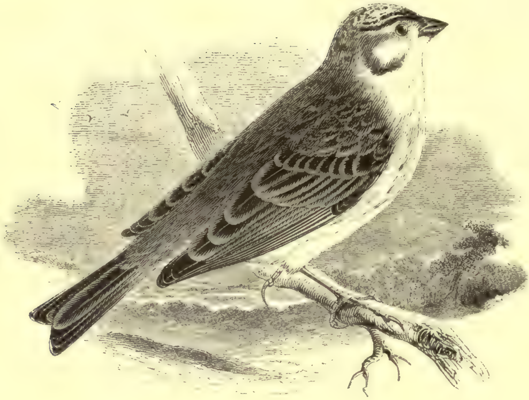
Young birds resemble the female. Young males obtain a black head in the spring following their first winter.

The vignette below represents the breast bones of the Common Bunting and the Black-headed Bunting.



INSESSORES.
CONIROSTRES.

EMBERIZIDÆ.



THE YELLOW BUNTING,

OR YELLOW AMMER.

Emberiza citrinella.

Emberiza citrinella,	*Yellow Bunting,*	PENN. Brit. Zool. vol. i. p. 437.
” ”	” ”	MONTAGU, Ornith. Dict.
” ”	” ”	BEWICK, Brit. Birds, vol i. p. 175.
” ”	” ”	FLEM. Brit. An. p. 77.
” ”	” ”	SELBY, Brit. Ornith. vol. i. p. 288.
” ”	” ”	JENYNS, Brit. Vert. p. 131.
” ”	” ”	GOULD, Birds of Europe, pt. xvi.
” ”	*Bruant jaune,*	TEMM. Man. d'Ornith. vol. i. p. 304.

THIS handsome Bunting is one of our most common birds and the male makes himself conspicuous, in summer particularly, by frequenting almost every wood-hedge, garden, lane, or high road, flying from one low tree to another, or from bush to bush, as the traveller proceeds on his way. From the brilliancy of his plumage, the fine lemon-yellow colour of the head and breast, and the rich chestnut and brown of the back, this might claim for his species much greater distinction was he not so common everywhere; but his song also, though probably listened to with interest by his mate, is but indifferent, consisting chiefly of one note repeated five or six times in quick succession, followed by two others, the last of which is drawn out to a considerable length.

The Yellow Bunting is a late breeder generally, but some exceptions to this rule have been noticed; and the nest is most frequently placed upon or very near the ground, under shelter of a bush, in a hedge bottom, or on the grass-grown bank of a deep ditch or brook; and the moss, roots, and hair of which it forms its nest, are usually well put together. Exceptions to both these points also happen occasionally. Mr. Blackwall, in some ornithological remarks printed in the first volume of the Zoological Journal, says, "It is well known that the Yellow Bunting generally makes a very substantial nest; yet, from some internal defect, (for there did not appear to be any in its external configuration,) a female of this species, in June last, deposited its eggs on the bare ground, in which situation it sat upon them till they were hatched. It is evident that birds of the same species possess the constructive powers in very different degrees of perfection; for, though the style of the architecture is usually adhered to, the nests of some individuals are finished in a manner greatly superior to those of others. In the instance before us, the requisite instinctive capacity appears to have been wanting altogether, as it is known to be in the Nightjar, Cuckoo, Cow-pen bird, and some species of waterfowl." Mr. Salmon mentions, in the second volume of the Naturalist, having found the nest of this bird at the extraordinary elevation of seven feet from the ground, among the branches of some broom, which, though naked at bottom, were thick, close, and bushy at the head.

The eggs are of a pale purplish white colour, streaked, or veined and speckled, with dark reddish brown: the length ten lines and a half, by eight lines in breadth. The male, whose song is heard in spring and summer, but particularly during warm sunny days in June, is remarkable for his attentions to his female, taking his turn upon the eggs during the period of incubation; and Mr. N. Wood mentions having heard him sing while thus engaged upon the nest. The young are seldom able to fly before the second week in June, but they are generally ready to leave the nest within a fortnight after the time of being hatched; and if often visited before they are able to fly, their fears induce them to quit their discovered retreat a few days sooner. In winter they are gregarious, flocking with Chaffinches, Greenfinches, and others, to visit the farmers' stack-yard, feeding on grain, seeds, and insects. Sometimes the Yellow Buntings, like the Common Buntings, pass the night on the ground; but in very cold weather they resort at roosting time to the shelter and temperature afforded by thick bushes and evergreen shrubs. In Italy great quantities of this species are caught, with the Ortolan Bunting, and fattened for the purposes of the table; as we in this country consume Wheatears in summer and autumn, and Larks in winter.

Of the localities inhabited by the Yellow Bunting in Britain, it may be sufficient to say that it is common and indigenous to England, Wales, Ireland, and Scotland. It is not included in the *Fauna Orcadensis* of the Rev. Mr. Low, but Mr. Dunn, who has lately visited both Orkney and Shetland more than once, says it is a visitor, though a rare one, to both countries, but is only to be seen during the winter season. It inhabits Denmark, Norway, and Sweden, and is found over the European Continent from thence to the shores of the Mediterranean, but not on the islands, or at most but very rarely.

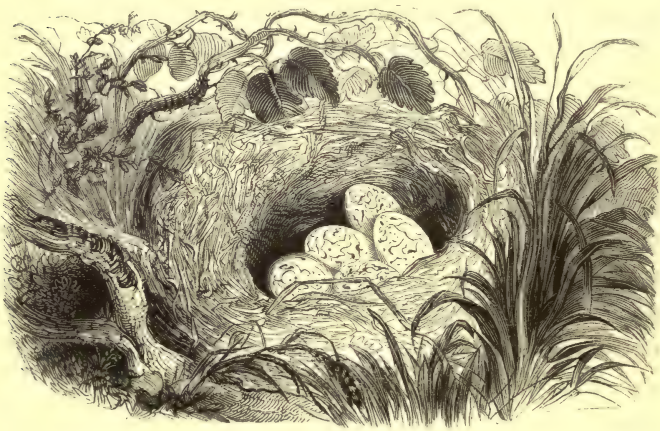
I have ventured to restore to this bird what I believe to have been its first English name, Yellow Ammer, although it appears to have been printed Yellow Ham, and Yellow Hammer, from the days of Dr. Wm. Turner and Merrett to the present time. The word Ammer is a well-known German term for Bunting in very common use; thus Bechstein employs the names Schnee-ammer, Grau-ammer, Rohr-ammer, Garten-ammer, and Gold-ammer, for our Snow Bunting, Corn Bunting, Reed Bunting, Ortolan, or Garden Bunting, and Yellow Bunting. Prefixing the letter H to the word appears to be unnecessary, and even erroneous, as suggesting a notion which has no reference to any known habit or quality in the bird.

The adult male in summer has the beak of a bluish horn colour; the palatal knob less conspicuous than in the Common Bunting; the irides dark brown; the head, cheeks, ear-coverts, and nape of the neck, bright lemon-yellow, varied with a few dusky black patches, that are most conspicuous at the boundary of the ear-coverts; the upper part of the back and wings reddish brown, tinged with yellow, each feather having a dark brown patch at its centre; the wing-primaries dusky black, with narrow external edges of bright yellow: the secondaries, tertials, and both sets of wing-coverts, dusky black, broadly margined with rich chestnut brown; upper tail-coverts reddish chestnut, edged with yellow; the central pair of tail-feathers shorter than the others, and dusky black, edged with chestnut, and tinged with yellow; the next five feathers on each side dusky black; the two outer ones on each side having a broad patch of white on the inner web; the form of the tail slightly forked; the chin, throat, breast, and all the under surface of the body, bright lemon-yellow, clouded on the breast and flanks with reddish brown; under wing and tail-coverts yellow; under surface of wing and tail feathers grey; legs, toes, and claws, light brown.

The whole length of the bird seven inches. From the carpal joint to the end of the wing, three inches and a half: the first three primaries nearly equal in length, but the first rather the longest; the fourth a little shorter than the third, and the fifth one quarter of an inch shorter than the fourth.

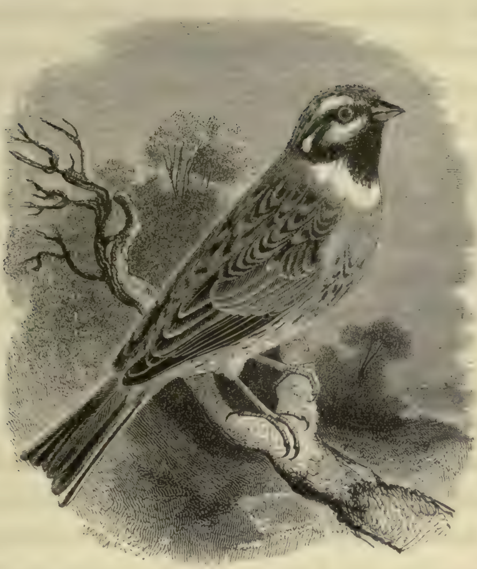
The female has much less yellow about the head, and her colours are in general much less vivid.

Young birds have no yellow colour on the head till after their first autumn moult, and the head is patched with dusky black. Young males after their first moult have the yellow colour much more mixed with greyish dusky spots than older males: the bright lemon-yellow colour in very old males is extended over a larger surface.



INSESSORES.
CONIROSTRES.

EMBERIZIDÆ.



THE CIRL BUNTING.

Emberiza cirlus.

Emberiza cirlus, Cirl Bunting,	PENN. Brit. Zool. vol. i. p. 438.
„ „ „ „	MONTAGU, Ornith. Dict.
„ „ „ „	BEWICK, Brit. Birds, vol. i. p. 177.
„ „ „ „	FLEM. Brit. An. p. 77.
„ „ „ „	SELBY, Brit. Ornith. vol. i. p. 292.
„ „ „ „	JENYNS, Brit. Vert. p. 131.
„ „ „ „	GOULD, Birds of Europe, pt. x.
„ „ *Bruant Zizi,*	TEMM. Man. d'Ornith. vol. i p. 313.

ALTHOUGH this bird appears, from the quotations above cited, to be included in the later editions of the works of Pennant and Bewick, we are indebted to Colonel Montagu for the addition of this species of Bunting to our catalogue of British Birds. It was discovered by him near Kingsbridge in the winter of 1800, among flocks of Yellow Buntings and Chaffinches, from which he obtained several specimens of both sexes. In the following summer these birds were found breeding in several localities on the coast of Devonshire, and a detailed account of their habits, and the mode by which the young were successfully reared, was communicated to the Linnean Society by Colonel Montagu, and was published in the seventh volume of the Transactions of the Society.

The Cirl Bunting is generally found on the coast, and does not often appear to go far inland. In some of its habits it resembles the Yellow Bunting, last described, the male frequently singing from an upper branch of a tree, his song resembling that of the yellow bird, but delivered rather more rapidly, and without the long finishing note. The female has but a single call-note. They generally build in furze, or some low bush ; the nest is composed of dry stalks, with a little moss, and lined with long hair and fibrous roots : the eggs are four or five in number, of a dull white, tinged with blue, streaked and speckled with dark liver brown ; the length ten lines, by eight lines in breadth. The young are hatched in thirteen or fourteen days, and are supplied by the parent birds with insect food ; when reared by hand, Colonel Montagu found grasshoppers most serviceable, with the addition of uncooked meat finely divided. Some years since, several old birds were observed, near Brading in the Isle of Wight, to feed constantly on the berries of the woody nightshade, *Solanum dulcamara ;* and a paste made of these berries, mixed with wheat flour and fine gravel, proved excellent food for some of their young birds, which were reared without difficulty.

Mr. Blyth has published in the second volume of the

Naturalist some interesting notes on the habits of this species, as observed by himself in the Isle of Wight. It is much more shy than the Yellow Bunting. The nest is usually placed higher above the ground than that of the Yellow Bunting. French Yellow Ammer, and Black-throated Yellow Ammer, are the provincial names which have been applied to it.

Since Colonel Montagu's discovery of the Cirl Bunting in Devonshire, this species has been observed in many other counties. It has been found in Surrey near Godalmin, and in Hampshire about Alton and Selborne, as noticed by Mr. Blyth, and in the Isle of Wight; in Berkshire it was obtained by the Rev. Orpen Morris; in Sussex it was observed by Mr. Gould to be abundant about Chichester, and is constantly found in Wiltshire, Dorsetshire, and Devonshire; it is not unfrequent in Cornwall, having been taken at Penzance and at Penryn; Mr. Bewick says, "Our figure is from a well-preserved specimen presented to the Newcastle Museum by Mr. Henry Memburn, of St. Germain, Cornwall, where it was shot in 1822. This gentleman has besides ascertained that they breed in that neighbourhood, frequenting woods and high trees, generally perching near the top." It has also been observed and obtained by Mr. Anstice in Somersetshire. Occasionally in winter specimens are taken by the London bird-catchers.

In the northern counties the Cirl Bunting is very rare. One was obtained in 1837 near Doncaster by Mr. Neville Wood. Mr. Thomas Allis sent me notice of one that had been taken near York; and a third was obtained near Edinburgh, as noticed by Mr. Wilson in the second volume of the Memoirs of the Wernerian Society.

The Cirl Bunting is most numerous in the southern parts of the European Continent. In France it is only seen when going northward in spring, and again when returning and going southward in autumn. It is very abundant in Switzerland and Italy, and along the shores of the Mediterranean. It is found in Sicily, Malta, Algeria and Crete. Mr. H. E. Strickland says of this bird in Smyrna, that it haunts the vicinity of streams, and seems in that country to replace the Yellow Bunting, which he did not notice in Asia Minor.

The adult male in summer has the beak bluish lead colour, the palatal knob about the same size as that of the Yellow Bunting; the irides hazel; the top of the head dark olive, streaked with black; over the eye, and on the cheeks, a patch of bright lemon-yellow; the ear-coverts dark dusky green; the back rich chestnut brown; the primaries and secondaries dusky black, with very narrow yellowish edges; the tertials, the small and the large wing-coverts, dusky black in the centre, broadly margined with chestnut; upper tail-coverts yellowish-olive, streaked with dusky grey; tail-feathers dusky black; the outer two on each side with a patch of white on the inner broad webs; the central pair rather shorter than the others, and tinged with red, the rest with very narrow light-coloured edges. The chin and throat black; below the black a crescentic patch of bright lemon-yellow, the ends of which reach to the inferior edge of the dark ear-coverts; upper part of the breast dull olive, bounded below by a chestnut band, which is narrowest in the middle; belly and under tail-coverts dull yellow; legs, toes, and claws, light brown.

In winter the plumage is less brilliant generally, and the black feathers of the head and throat have lighter-coloured margins.

The whole length of the male bird, six inches and a half. From the carpal joint to the end of the wing, three inches and a half: the second and third primaries are equal in length, and the longest in the wing; the first and fourth are also equal in length, but a little shorter than the second and third; the fifth full one-eighth of an inch shorter than the fourth.

The female is without the black colour or the bright lemon yellow on the head and throat; the upper surface of the head and body is streaked longitudinally with black on the dull olive colour of the one, and the reddish brown of the other; the under surface of the body is similarly streaked with black on a dull and dingy yellow.

Young birds very closely resemble adult females.

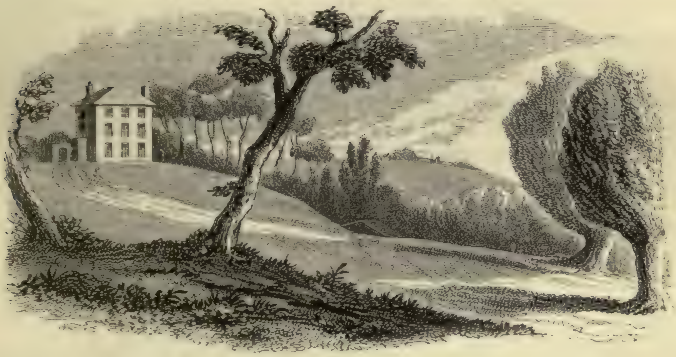
English Naturalists are greatly indebted to Colonel Montagu for the careful and patient investigation he bestowed upon various subjects, which enabled him to produce several valuable communications, and make many interesting additions to British Zoology. He contributed nine papers to the Linnean Society, between the 1st of March 1796 and the 6th of June 1815, which are published in the Transactions of that Society; and six papers were furnished to the Wernerian Natural History Society between the 11th of March 1809 and the 20th of March 1815; these were also published in the Memoirs of that Society. In 1802 Colonel Montagu published his Ornithological Dictionary, the best history of British Birds at that time. The Supplement to this Dictionary, published in 1813, was a valuable addition, from the increased accumulation of observed facts. In 1803, Colonel Montagu published his TESTACEA BRITANNICA, in two volumes quarto, with plates, and afterwards a Supplement, which, now in 1838, is still the best work on the subject. His notes in Ichthyology, which by the kindness of my friend Mr. Broderip, I was allowed to avail myself of in the History of British Fishes, included references to seventy-four species.

Colonel Montagu supplied several new Crustacea to his friend Dr. Leach, while the latter was engaged on the *Malacostraca Podopthalmata Britanniæ*, who, under the article on *Processa canaliculata*, tab. xli., thus notices what had then very recently occurred: — "Since writing the above, I have received intelligence of the death of this most zealous Zoologist, in whom science has lost an able supporter, the world an accomplished gentleman, and his friends a most valuable companion and correspondent. His published works, and numerous papers, leave proofs of his industry and research that will cause his name ever to be remembered and respected by British Zoologists. We still hope to see his observations on the British Mollusca and Vermes, which have long been prepared for publication."

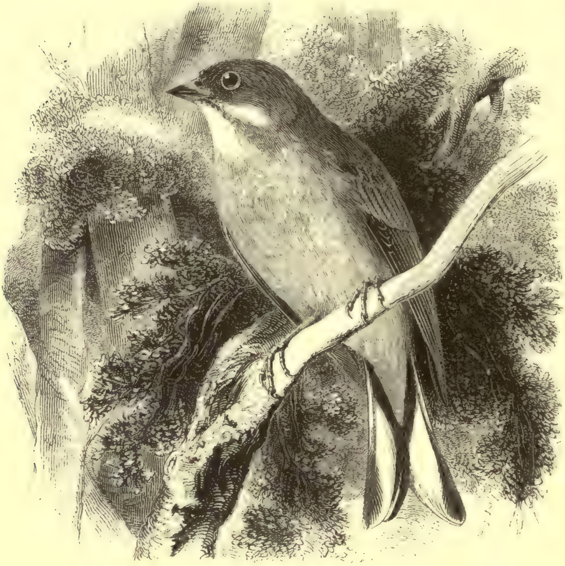
His death was thus noticed in the Second Part of the eighty-fifth volume of the Gentleman's Magazine, p. 281.

"Died on the 28th of August 1815, at Knowle House, Devon, in his 64th year, George Montagu, Esq., many years a Lieutenant-Colonel of the Wilts Militia. He possessed talents of the highest order; and as a writer of Natural History, his name will descend to posterity with praise and admiration. He had chosen a retirement in the fine county of Devon, singularly beautiful, for the prosecution of his inquiries into the works of Nature; and some very rare MSS. were in preparation for the press at the time of his death. Colonel Montagu was of very ancient and honourable descent, being, on the paternal side, from the family of Montagu, of Lackham House, Wilts, closely allied to the noble houses of Manchester and Sandwich; and, on the maternal side, from the family of Hedges of Alderton, county of Gloucester, of whom Sir C. Hedges, secretary of state to Queen Anne, was a distinguished ornament. Colonel Montagu possessed a long correspondence between her Majesty and her favourite secretary, which, with the family estates of Lackham and Alderton, descend to his son, George Montagu, Esq."

The vignette here introduced is a representation of Knowle House, or Knowle Cottage, rather, as it is there called, which is situated about half a mile from Kingsbridge, and at which Colonel Montagu resided many years. For this opportunity of presenting a memorial of an English Zoologist, I feel myself greatly indebted to the kindness of the Rev. Robert Holdsworth of Brixham, who supplied me with the sketch from which the vignette below was prepared.



INSESSORES. *EMBERIZIDÆ.*
CONIROSTRES.



THE ORTOLAN BUNTING.

Emberiza hortulana.

Emberiza	*chlorocephala,*	*Green-headed*	*Bunting,*	Montagu. Ornith. Dict.
”	”	”	”	Bewick, Brit. Birds, vol. i. p. 173.
”	*hortulana,*	*Ortolan*	”	Selby, Brit. Ornith. vol. i. p. 294.
”	”	”	”	Jenyns, Brit. Vert. p. 132.
”	”	”	”	Gould, Birds of Europe, pt. vi.
”	”	*Bruant Ortolan,*		Temm. Man. d'Ornith. v. i. p. 311.

The Green-headed Bunting was first described and figured by Brown in his Illustrations of Zoology, page 74, tab. 30, from a living specimen then in the possession of Mr. Moon in Hyde Park, which was taken in Mary-labonne Fields by a London bird-catcher. Dr. Latham describes a Green-headed Bunting in the collection of Marmaduke Tunstal, Esq., in the third volume of his Synopsis, page 211, No. 61. From these sources a description of this bird was copied by Gmelin, Lewin, Montagu, and others. Latham and Montagu both express their doubts of its being a distinct species, no other instances appearing to be recorded than those before mentioned. To the Synopsis of the Newcastle Museum, by George T. Fox, Esq., F.L.S., we are indebted for much valuable information on various zoological subjects, and some particulars of the Green-headed Bunting. From this gentleman's statement, we learn that the specimen of the Green-headed Bunting figured by Brown, while it was alive in the possession of Mr. Moon, passed, when dead, into the possession of Mr. Tunstal, and was preserved for his collection; the same specimen had therefore furnished the materials for each of the authors before enumerated. By the kindness and influence of Mr. Fox, this specimen was a few years ago sent up from Newcastle, and exhibited at a meeting of the Linnean Society, and at the Zoological club; and no doubt remained in the minds of the members who were conversant with birds, that the Green-headed Bunting was only a variety of the Ortolan Bunting, the plumage having become darker, the colours more intense,—a change frequently produced by artificial food and long confinement. Mr. Selby, who has had opportunities of comparing the specimen in the Newcastle Museum with examples of the true Ortolan Bunting, has recorded his opinion to the same effect. From Mr. Fox we also learn that the Wycliffe collection, which came under his inspection, contained a specimen of the Ortolan Bunting. Mr. Bewick, in the last edition of his beautiful work on British Birds, and in the Supplement to a previous edition, has given a figure and description of the true Ortolan Bunting. This representation was taken from a bird caught at sea, a few miles off the Yorkshire coast, by the master of a trading vessel, in May 1822. This specimen, which came into the possession of Mr. Fox, was lent to Mr. Bewick for his use in his work on British Birds. A fine male specimen was killed near Manchester in November 1827; and in 1837 another male Ortolan was caught near London, along with Yellow Buntings, in a bird-catcher's net, and deposited in the aviary at the Zoological Gardens, as recorded by Mr. Blyth.

At the end of April 1841 a fine specimen was shot whilst sitting on the parapet of the viaduct of the Brighton and London Railway, near the Brighton terminus. This example is now in the possession of Mr. William Borrer, jun., of Henfield.

The Ortolan Bunting is only a summer visitor to the middle and northern countries of Europe; but considering the high northern latitude which this bird attains every season, it is rather matter of surprise that more specimens have not been recorded as obtained in this country. It visits and produces its young in Denmark, Sweden, and Norway; and Linnæus, in his Tour, mentions having seen it in Lapland on the 22nd of May. M. Temminck says, it is sometimes found in Holland. M. Vieillot observes of this species, in his *Faune Française*, that it is most numerous in the southern parts of France, where it arrives about the same time as the Swallows, and a little before the Quails. Mr. Hoy, in a letter to me, says in reference to the habits of this bird on a part of the Continent farther north than that referred to by M. Vieillot, "that it makes its appearance at the beginning of May, and almost immediately pairs and commences building; its monotonous chirping notes are heard the whole day long; these birds prefer light sandy soils, and build invariably on the ground in fields of corn, at least, I have never met with a nest in any other situation; those I found were placed in a slight hollow, were something similar to the nest of the Sky Lark, but rather more compact; the interior lined with fine grass and a few hairs; the eggs are from four to six in number," bluish white, speckled and spotted with black. "These birds retire southward early, few being seen after the end of August. They are at that time taken in great numbers in nets with decoy birds, and fattened for the table." Mr. Gould says that when thus caught they are kept in a dark room, and there fed with plenty of oats and millet seed, upon which they quickly fatten; and Mr. David Booth, in his Analytical Dictionary of the English Language, which abounds with interesting references to Natural History, says, "these birds are fed up till they become lumps of fat of three ounces in weight, some of which are potted, or otherwise preserved, and exported to other countries."

The natural food of the Ortolan Bunting is grain and seeds when ripened, with insects during the early part of the season.

It is a common bird in the southern countries of Europe from May to August, is seen at Gibraltar every spring and autumn, is common at Tangiers, and winters in North Africa. It is found in Sicily, Malta, and Crete. It was observed at Smyrna by Mr. H. E. Strickland in April, and is included by Colonel Sykes in his Catalogue of the Birds of the Dukhun.

The adult male in summer has the beak reddish brown, the palatal knob small; the irides brown; head and cheeks greenish grey; the feathers on the back rich reddish brown, but almost black in the centre; primaries dusky black, narrowly edged with rufous brown; tertials and wing-coverts dusky black with broad rufous brown margins; upper tail-coverts reddish brown; tail-feathers dusky black, two and sometimes three outer feathers on each side with a patch of white on the broad inner web; the chin, throat, and upper part of the breast, yellowish green; the other under parts of the body reddish buff palest in colour on the belly and under tail-coverts; legs, toes, and claws, pale brown, tinged with red.

The back of this bird being very similar in appearance to that of the Cirl Bunting, a front view of this species was given to avoid repetition.

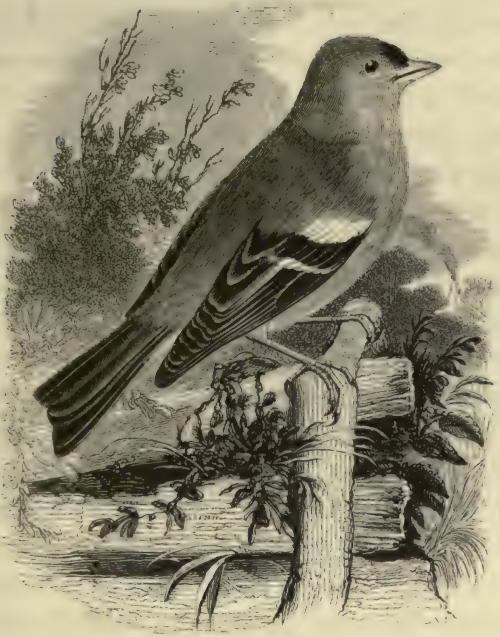
The whole length of the bird is six inches and one quarter. From the carpal joint to the end of the wing, three inches and a half: the first three feathers of the wing equal in length, and the longest in the wing; the fourth nearly one quarter of an inch shorter than the third.

The female has the colour of the head more mixed with grey, and streaked with dark brown; the upper part of the breast spotted with dark brown and the buff colour below, as well as the other colours, generally less vivid.

Young birds of the year resemble the female.

M. Temminck, M. Vieillot, and others, well acquainted with this species, refer particularly to the variations that are occasionally found in the colours of its plumage. M. Vieillot enumerates six varieties that have occurred, the third of which, his variety *C*, is described as having the head and neck green.

INSESSORES. *FRINGILLIDÆ.*
CONIROSTRES.



THE CHAFFINCH.

Fringilla cœlebs.

Fringilla cœlebs,	*The Chaffinch,*	Penn. Brit. Zool. vol. i. p. 452.
,,	,, ,,	Montagu, Ornith. Dict.
,,	,, ,,	Bewick, Brit. Birds, vol. i. p. 191.
,,	,, ,,	Flem. Brit. An. p. 83.
,,	,, ,,	Selby, Brit. Ornith. vol. i. p. 303.
,,	,, ,,	Jenyns, Brit. Vert. p. 133.
,,	,, ,,	Gould, Birds of Europe, pt. xiii.
,,	,, *Gros-bec pinson,*	Temm. Man. d'Ornith. vol. i. p. 357.

Fringilla. *Generic Characters.*—Beak straight, longer than deep, conic and pointed; mandibles nearly equal, cutting edges entire, forming a straight commissure. Nostrils basal, lateral, oval, partly hidden by the frontal plumes. Wings with the first quill-feather longer than the fifth, but a little shorter than the second or third, which are equal, and the longest in the wing. Legs with the tarsi of moderate length; toes divided, and adapted for hopping and perching; claws curved and sharp.

THE male Chaffinch is one of the most handsome of our common small birds, and in his general deportment is as lively as he is handsome. Thus distinguished by bright colours and active habits, and being besides very numerous as a species, and confident in behaviour, allowing the near approach of observers without exhibiting much alarm, the Chaffinch is extremely well known; and as his gay appearance and song, frequently noticed as early as February, points him out as one of the first of our indigenous birds to afford an indication of returning spring, he is for these various reasons a general favourite. With our Continental neighbours the Chaffinch is one of their most common cage-birds; and in France, from the lively colours and demeanour of this bird, the term "*gay as a Chaffinch*," is a proverbial phrase in frequent use. Linnæus, in his Fauna of Sweden, says that the female Chaffinches migrate from that country in winter, but that the males do not, and he bestowed upon the species the name of *cœlebs*, or bachelor, in reference to these deserted males. At the present time Professor Nilsson, of Sweden, says, that although but few remain in that country during winter, they are not males only; but even the temporary separation of the sexes among birds is not an unusual occurrence, and Mr. Selby, in his history of the Chaffinch, says, that in "Northumberland and Scotland this separation takes place about the month of November, and from that period till the return of spring, few females are to be seen, and those few always in distinct societies. The males remain, and are met with, during the winter, in immense flocks, feeding with other granivorous birds in the stubble lands, as long as the weather continues mild, and the ground free from snow; resorting, upon the approach of a storm, to farm yards, and other places of refuge and supply. It has been noticed by several authors, that the arrival of the males, in a number of our summer visitants, precedes that of the females by many days;—a fact from which we might infer that in such species a similar separation exists between the sexes before their migration." White, in his History of Selborne, remarks that for many years he had observed that towards Christmas, vast flocks of Chaffinches appeared in the fields, many more, he used to think, than could be hatched in any one neighbourhood, and on observing them more narrowly he was amazed to find that they appeared to be almost all hens. We certainly receive a considerable accession to our numbers at the great autumnal migration, most probably from Sweden and Norway; I have, however, reason to believe that some of the large flocks of supposed females only, are in reality old females accompanied by their young birds of that year, which in plumage resemble females, the young males not having at that time acquired the brilliancy of colours which renders them so conspicuous afterwards when adult.

Their flight, like that of most of the Finches, is undulatory, and their food insects, with some young and tender vegetables in spring and summer, at other seasons grain and seeds. Gardeners are most of them enemies to Chaffinches, on account of their partiality to early sown radishes when first appearing above ground, and some few other mischievous propensities. The common name of Pink by which this bird is known provincially, has reference to the sound of its call-note, and has its echo in several northern languages.

The Finches generally are remarkable for the neatness and beauty of the nests they construct, and the Chaffinch is no exception to the rule. The outside of their nest is composed of moss, studded with white or green lichens, as may best accord with the situation in which it is built; the inside is lined with wool, and this again covered with hair and some feathers; the eggs are usually four or five in number, of a pale purplish buff, sparingly streaked and spotted with dark reddish brown. The place chosen is variable, sometimes it is fixed in the fork of a bush in a hedgerow, on a branch of a wall-fruit tree, frequently in an apple or pear tree several feet above the ground. A correspondent in the Field Naturalists' Magazine, relates that a pair of Chaffinches built in a shrub so near his sitting-room window as to allow him to be a close observer of their operations. The foundation of their nest was laid on the 12th of April; the female only worked at the nest-making, and by unwearied diligence, the beautiful structure was finished in three weeks: the first egg was deposited on the 2nd of May; four others were subsequently added, and the whole five were hatched on the 15th. During the time of incubation, neither curiosity nor constant observation from the opened window disturbed the parent bird; she sat most patiently; the male bird often visited his partner, but it was not discovered whether he ever brought her food.

The Chaffinch is too generally distributed over all the British Islands to require extended notice of localities; it inhabits Denmark, Norway, Sweden, and other northern parts of the European Continent, extending southwards to the shores of the Mediterranean, being migratory in the colder countries, and stationary in those which are warmer. It is found in Sicily, Malta and Crete. It is a common bird in the Levant and in Northern Africa. I have little doubt that it is also found in the Canary Islands and

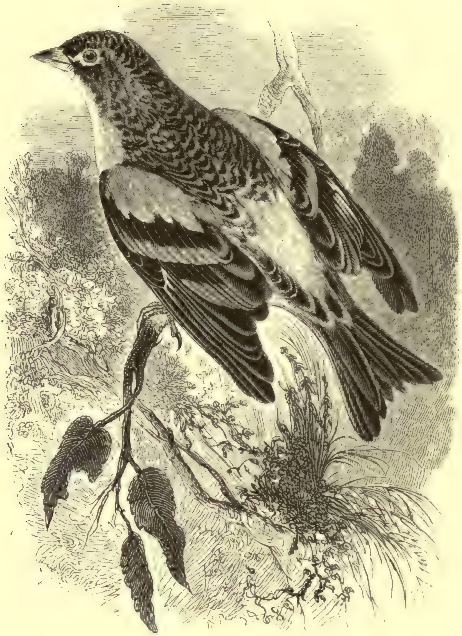
Madeira, as it has been seen by Mr. Charles Darwin, and another observer, as far west as Terceira, one of the Azores.

The adult male in summer has the beak bluish lead colour, with a tinge of purplish red on the under surface of the under mandible; the feathers over the base of the upper mandible black; the irides hazel; top of the head and nape of the neck dark bluish grey; back chestnut; wings almost black; smaller wing-coverts white; the greater wing-coverts black at the base, tipped with white, the two sets of wing-coverts forming two conspicuous white bars; all the quill-feathers dusky black, with narrow lighter-coloured edges, the tertials with broader margins of buffy white; rump and upper tail-coverts yellowish green; the two middle tail-feathers greyish black, the next three on each side nearly black; the outer tail-feather on each side white, with a narrow stripe of dusky black at the base and at the tip; the next feather on each side dusky black, with a triangular patch of white on the inner web; the tail is very slightly forked; the cheeks, ear-coverts, chin, throat, breast, and flanks, a rich reddish brown, becoming paler on the belly and under tail-coverts; legs, toes, and claws, brown.

The whole length of the bird six inches. From the carpal joint to the end of the wing, three inches and three-eighths; the first quill-feather a little longer than the fifth; the second, third, and fourth feathers equal in length, and the longest in the wing.

The female has the upper surface of the body more mixed with dull brown, producing considerable uniformity of colour; the under surface is also of a dull fawn colour; the two white bars on the wings are rather less conspicuous.

INSESSORES. *FRINGILLIDÆ.*
CONIROSTRES.



THE MOUNTAIN FINCH.

BRAMBLING, OR BRAMBLE FINCH.

Fringilla montifringilla.

Fringilla	*montifringilla,*	*Bramble Finch*	PENN. Brit. Zool. vol. i. p. 454.
„	„	*Brambling,*	MONTAGU, Ornith. Dict.
„	„	*Mountain Finch,*	BEWICK, Brit. Birds, vol. i. p. 193.
„	„	„ „	FLEM. Brit. An. p. 84.
„	„	„ „	SELBY, Brit. Ornith. vol. i. p. 306.
„	„	„ „	JENYNS, Brit. Vert. p. 134.
„	„	„ „	GOULD, Birds of Europe, pt. xii.
„	„	*Gros-bec d'Ardennes,*	TEMM. Man. d'Ornith. vol. i. p. 360.

THE MOUNTAIN FINCH, Brambling, or Bramble Finch, is in this country a winter visitor only, coming to us from the North; but in reference to the time at which it makes its appearance, as well as to the numbers of the birds that arrive, there is considerable variation in different years, both events probably depending on the temperature of the country from which they have emigrated. It is mentioned in Bewick's History of British Birds that they have been seen on the Cumberland Hills as early as the middle of August, but their general appearance is much later. They frequent thick hedges, and feed on the grain and seeds to be found on stubble land, in company with Yellow Buntings, Chaffinches, and others. Mr. Scales, an agriculturist of Beecham Well, in the county of Norfolk, used to consider them of service to his land from their devouring in great abundance the seeds of the knot grass, *Polygonum aviculare.* In severe weather large flocks of these birds are observed to feed upon beech mast; and Pennant, in reference to the numbers that occasionally fly together, mentions that he once had eighteen sent him from Kent, which were all killed at one shot. Some of our London bird-catchers take them in their nets, and in confinement they are bold and hardy.

They are not known to breed in any part of this country, though it seems probable that now and then a pair of these birds may remain through the summer. In Mr. Loudon's Magazine of Natural History for 1835, there is a notice of one bird that was shot on the 6th of May of that year in a fir plantation about four miles east of York. Several specimens have lived and exhibited their perfect summer plumage in the aviary devoted to British Birds in the gardens of the Zoological Society in the Regent's Park, but they did not breed.

The Brambling is pretty generally distributed over England in winter, even as far as the extreme southern counties of Dorsetshire and Devonshire. Mr. Couch includes it in his Cornish Fauna; and E. H. Rodd, Esq., of Penzance, has sent me word that a pair of these birds were killed near the Land's End in the winter of 1836-37, which are now preserved in his collection. William Thompson, Esq., of Belfast, includes it in his notes sent me as one that occasionally occurs in winter in various parts of Ireland. Sir William Jardine, in reference to Dumfries-shire, says it appears in flocks about the beginning of November, frequenting beech trees, and feeding on the mast; and Mr. Macgillivray mentions having fallen in with a flock also on some beech trees about a mile from Corstorphine, near Edinburgh, from which he shot two birds, and has seen many others that had been killed in Scotland.

It is not an uncommon bird in Denmark. Mr. Hewitson saw them at one place in the southern part of Norway, where they were breeding; it is known to breed also in the woods of Norholm and Drontheim, and is said to breed in Lapland. M. Nilsson says that in the southern parts of Sweden it is only a winter visitor, appearing in autumn, and remaining till April. This species is described as building in fir trees, the nest formed of moss, and lined with wool and feathers: the eggs four or five in number, white, tinged with yellow, and spotted with dark red like those of the Chaffinch. The call-note of this bird is a single monotonous chirp.

This species ranges in winter over the European Continent as far south as Italy, Sicily, and Malta; was seen by Mr. Strickland at Smyrna; and is included by M. Temminck in his Catalogue of the Birds of Japan.

The male in winter has the beak yellowish white, with the point bluish black; the irides brown; the top of the head, cheeks, ear-coverts, nape of the neck, and the back, mottled with brown and black, each feather being black at the base, and brown at the tip; scapulars and smaller wing-coverts rich fawn colour, the latter tipped with white; greater wing-coverts jet black, tipped with fawn colour; quill-feathers black; the primaries with narrow, light-coloured outside edges, the tertials broadly edged with fawn colour; rump and upper tail-coverts white, slightly varied with a few black feathers, which are brown at the tips; tail-feathers black, edged with buffy white, the outer feather on each side with a patch of dull white on the broad inner web, the middle pair shorter than the others; the form of the tail forked; the chin, throat, upper part of the breast and sides, rich fawn colour; lower part of the breast, the belly, and under tail-coverts, white; the flanks varied with black and light brown; a small tuft of elongated feathers under the wing, forming an axillary plume, and the smaller under wing-coverts bright yellow; the other under wing-coverts white; legs, toes, and claws, light brown.

In spring the brown tips to the black feathers on the head and neck are lost, leaving these parts of a fine velvet black, which the bird retains till the next autumn moult; the beak during spring and summer lead blue.

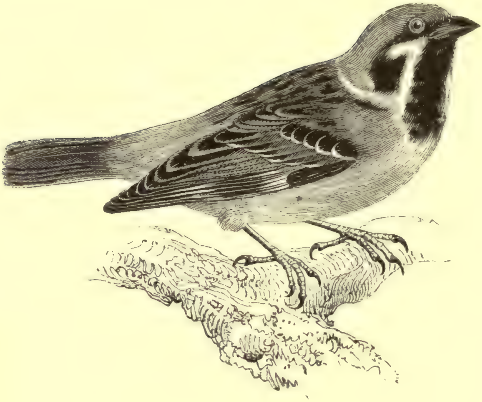
The whole length of the male bird is six inches and three-quarters. From the carpal joint to the end of the wing three inches and five-eighths: the first three wing-feathers nearly equal in length, and the longest in the wing; the fourth feather about one-eighth shorter than the third.

The female in winter has less black colour on the top of the head; the cheeks, ear-coverts, and neck, dull brownish grey, with two dark lines dividing the sides of the neck from the nape: the other colours of the body less pure, and clouded with dull brown.

Young birds of the year, M. Temminck says, have the throat white, but otherwise resemble adult females.

INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE TREE SPARROW.

Passer montanus.

Fringilla montana,	*Tree Sparrow,*	PENN. Brit. Zool. vol. i. p. 458.
,, ,,	,, ,,	MONTAGU, Ornith. Dict.
,, ,,	*Mountain* ,,	BEWICK. Brit. Birds, vol. i. p. 190.
Pyrgita ,,	*Tree* ,,	FLEM. Brit. An. p. 83.
Passer montanus,	,, ,,	SELBY, Brit. Ornith. vol. i. p. 300.
Fringilla montana,	,, ,,	JENYNS, Brit. Vert. p. 135.
Pyrgita ,,	,, ,,	GOULD, Birds of Europe, pt. xvi.
Fringilla ,,	*Bec-fin Friquet,*	TEMM. Man. d'Ornith. vol. i. p. 354.

PASSER. *Generic Characters.*—Beak strong, conical, longer than deep, the upper mandible slightly curved, the lower mandible compressed, and smaller than the upper. Nostrils lateral, basal, rounded, partly concealed by the short feathers at the base of the mandible. Wings with the second quill-feather rather the longest. Legs with the tarsi nearly as long as the middle toe; claws sharp and curved, that of the hind toe rather larger than that of the middle toe. Tail nearly square.

I HAVE followed Mr. Selby in considering the numerous species of Sparrows, some of which are found in almost every country in the world, as entitled to generic distinction among the Finches, and in continuing to them also the name of *Passer*, bestowed upon them by Ray. Their habits, particularly in reference to the situation chosen for the nest, are distinct from those of the Finches generally, and in this circumstance our two native specimens agree more closely than has usually been stated. The Tree Sparrow is an active lively bird, in appearance, and in many of its other peculiarities, very similar to the well-known House Sparrow, and for which, I have no doubt, the Tree Sparrow has been often mistaken. It is not so numerous as a species, and much more local in distribution; but small colonies of them are to be found in various counties. In size it is smaller than our Common Sparrow, and is generally described as frequenting trees remote from houses, and building in the holes of decayed pollards. That these are not their universal habits, I learn from the Rev. James F. Dimock, and his brother George Dimock, of Uppingham in Rutlandshire, to whom I am indebted for the following particulars from their own observation. These birds frequently build in the thatch of a barn, in company with the House Sparrow, not however entering the thatch from the inside of the building like them, but by holes in the outside; five or six instances of this sort occurred in one building, and one or two pairs built about the farmhouse; to be certain as to the species, some old birds were watched, were shot when quitting their holes, and their eggs taken; in other instances the young birds were reared from the nest. They also built in the deserted nests of Magpies and Crows, in which they formed domed nests, as does the Common Sparrow, when it builds among the branches of trees, and one pair built in a hole of a tree that had been occupied by a Green Woodpecker. These different modes of building occur in a country abounding with pollards, ash, and willow trees. Mr. Hoy in a letter to me states, that he has observed on the Continent, where this species is rather numerous, that they often build in holes in the tiling of houses, and in stacks of wood-faggots, and M. Vieillot, when noticing these birds in France, says, that they occasionally build their nests in old walls, not many feet above the ground; and they are also observed to frequent gardens like the common House Sparrow. Their nests are formed of hay, and lined with feathers; the eggs from four to six in number, of a dull white, speckled all over with light ash brown; the length eight lines and a half, by six lines in breadth. The young are supplied with insects and soft vegetables, which are also the principal substances consumed by the old birds during spring and summer, and at other seasons of the year they feed on grain and seeds; both young and old flying in flocks with House Sparrows, Chaffinches, and other Finches, and Buntings, in and about farm-yards, corn-stacks, and any other places likely to supply food.

The common call-note of the Tree Sparrow is a monotonous chirp, not unlike that of the common House Sparrow, but more shrill; and of its higher powers of song, Mr. Blyth says, that "it consists of a number of these chirps, intermixed with some pleasing notes, delivered in a continuous unbroken strain, sometimes for many minutes together, very loudly, but having a characteristic sparrow-like tone throughout."

The Tree Sparrow is a rare species in most of the extreme southern counties of England, and is not included in some county catalogues of Sussex, Dorsetshire, Devonshire, or Cornwall; but Mr. E. H. Rodd, of Penzance, mentions in a private communication, that the Falmouth Museum contains a single specimen. It is not uncommon in Shropshire, as I learn from Robert Slaney, Esq., M.P., and Mr. Thomas Eyton. In Lancaster it has been observed about Chat Moss. On the eastern side of England, this bird appears to be a winter visitor at Southchurch in Essex, according to the observations of Mr. Parsons. It is found in Surrey, Suffolk, Norfolk, Cambridgeshire, Rutland, Lincolnshire, about Wainfleet, in Yorkshire at various localities; in Durham, and also in Northumberland; but I am unable to trace it much farther north than Newcastle, and it does not appear to have been noticed in Scotland.

Professor Nilsson includes the Tree Sparrow in his work on the Birds of Sweden, and also in his Fauna of Scandinavia, where he says it frequents gardens; and some authors have stated that this bird was found as far to the west of the European Continent as Hudson's Bay and North America; but this appears to have been a mistake, and refers to another species. The geographical range of the Tree Sparrow is to the northward and the eastward; it inhabits Lapland and Siberia: specimens have been received by Mr. Gould from the Himalaya mountain range and from China, it has been found in Nepal and at Calcutta, and M. Temminck includes it also in his Birds of Japan. In the southern part of Europe it is well known, being rather a common bird in France, Provence, Spain, and Italy, Sicily, Malta and Africa.

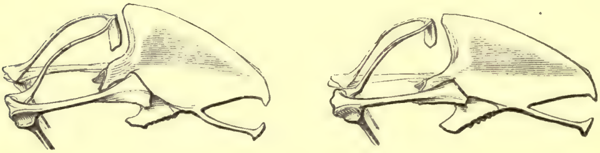
In summer the beak of the male is of a bluish lead colour; the irides hazel; the head and neck chestnut, bounded with white on each side of the neck; the back and wings reddish brown, streaked with pure black; both sets of wing-coverts black, edged with chestnut and tipped with white; primaries black, margined with brown; tertials broadly edged with chestnut brown; rump and upper-tail-coverts uniform pale brown; tail-feathers greyish brown, with lighter brown edges; chin and throat black: under the eye and over the ear-coverts a narrow black streak; cheeks, and sides of the neck, with a triangular spot of pure black; breast, belly, and under tail-coverts, dull brownish white, darker on the sides and flanks; under coverts of the wings pale fawn colour; legs, toes, and claws, pale brown.

The whole length of the male five inches and five-eighths. The first quill-feather the same length as the fifth; the second, third, and fourth, nearly equal in length, and the longest in the wing, but the second rather the longest of the three.

The female is smaller than the male, measuring only five inches three-eighths in length; but the plumage is the same, except that the colours are not quite so bright as those of the male.

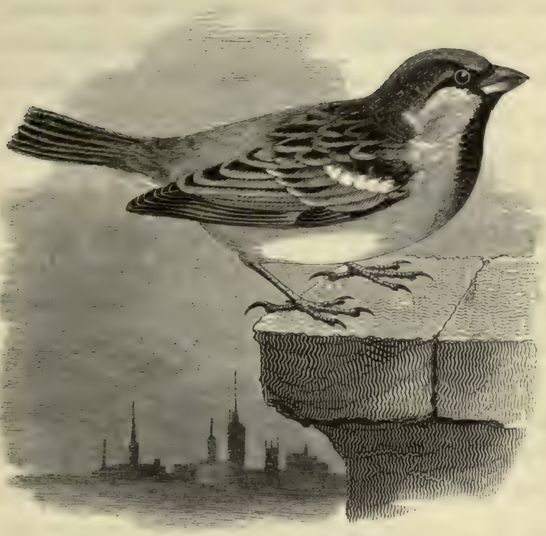
The young birds in their nestling feathers possess the chestnut head, black throat, and the white on the side of the neck; but the colours are paler than those of the adult birds.

The vignette below represents the breast-bones of the Brambling and the House Sparrow.



INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE HOUSE SPARROW.

Passer domesticus.

Fringilla domestica,	*The Sparrow,*	PENN. Brit. Zool. vol. i. p. 458.
" "	*House* "	MONTAGU, Ornith. Dict.
" "	*The* "	BEWICK, Brit. Birds, vol. i. p. 187.
Pyrgita "	*House* "	FLEM. Brit. An. p. 83.
Passer domesticus,	" "	SELBY, Brit. Ornith. vol. i. p. 298.
Fringilla domestica,	" "	JENYNS, Brit. Vert. p. 134.
Pyrgita "	*Common* "	GOULD, Birds of Europe, pt. xvi.
Fringilla "	*Gros-bec moineau,*	TEMM. Man. d'Ornith. vol. i. p. 350.

OF all our British Birds, the Common Sparrow alone is found throughout the year, whether in country or town, attached to, and identified with, the habitations of men; and such is the confident familiarity obtained by long intercourse, that from the thatch of the cottage of the peasant, to the elaborately ornamented architecture of the palace of the prince, all buildings are alike subject to its intrusion. The bird, however, that is reared in the smoky city, though perhaps more bold, active, vigilant, and assuming than that to be seen in the country, affords but a poor example of the colours that ornament the bird when seen in the cottage garden, or at the farmer's barn-door.

Of a species so well known as the Sparrow a very lengthened notice is not required: the history of the bird in one country is equally the detail of its habits in another. This is certainly the case with our Common House Sparrow, the geographical range of which, as a species, is very extensive.

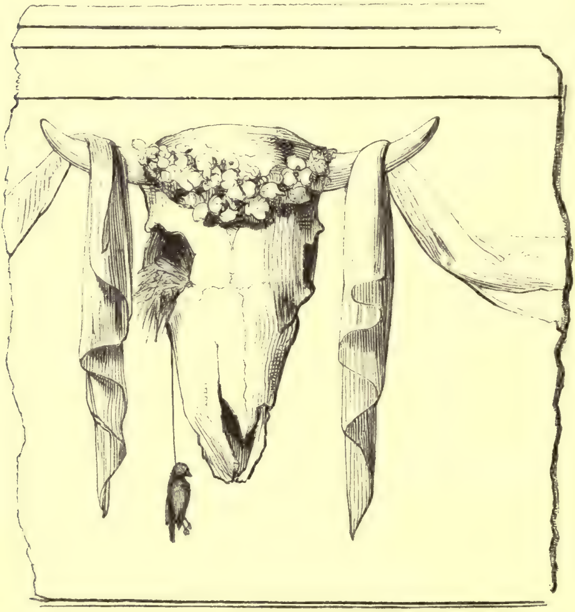
Our Sparrow pairs early in the season, and like most of those birds which are very prolific, great animosity and numerous contests for choice or possession occur at this season of the year. There are few persons who have not witnessed in spring the bustle and confusion attending what appears to be a sort of battle royal among Sparrows, in which five or six individuals are seen indiscriminately engaged attacking, buffetting, and biting each other, with all the clamour and fury of excited rage; but the matter in dispute being adjusted, each retires from the scene of contest to attend to his mate, and the performance of the more important duties of the season. Their nests are formed under the eaves of tiles, in holes or crevices in walls, in the orifices of old water-pipes, or in any cavity which will afford sufficient space for the mass of hay and feathers collected for their dwelling. The first batch of eggs usually consists of five or six, and two other sets are frequently produced in the season. The eggs are white, spotted and streaked with ash-colour and dusky brown, varying considerably in the quantity of this secondary colouring matter; the length of the egg ten lines, the breadth seven lines.

Occasionally the Sparrow builds among the higher branches of apple or plum trees in a garden, sometimes in other trees, but seldom choosing one that is far from a house; and the nest, when thus placed in a tree, is remarkable for its large size, as compared to the bird; it is formed with a dome, and composed, as in other cases, of a mass of hay, lined within with a profusion of feathers, to which access is gained by a hole in the side. So great is the partiality of the Sparrow for warmth, that abundance of feathers are used even to line a hole on the inner side of the thick thatching of a barn, and they have been seen collecting feathers in winter, and carrying them away to the holes they inhabited. Their young are fed for a time with soft fruits, young vegetables, and insects, particularly caterpillars, and so great is the number of these that are consumed by the parent birds, and their successive broods of young, that it is a question whether the benefit thus performed is not a fair equivalent for the grain and seeds required at other seasons of the year.

The great attachment of the parent birds to their young has been frequently noticed. In a note at the foot of the tenth page, vol. i. of the Zoological Journal, it is stated that a few years since a pair of Sparrows, which had built in the thatched roof of a house at Poole, were observed to continue their regular visits to the nest long after the time when the young birds take flight. This unusual circumstance continued throughout the year; and in the winter, a gentleman who had all along observed them, determined on investigating its cause. He therefore mounted a ladder, and found one of the young ones detained a prisoner, by means of a piece of string or worsted, which formed part of the nest, having become accidentally twisted round its leg. Being thus incapacitated for procuring its own sustenance, it had been fed by the continued exertions of its parents.

A still more singular accident which occurred to a Sparrow was described and figured in the Illustrated London News, for January 20th, 1844.

" The principal external ornament of the Rotunda, in Sackville Street, Dublin, is a richly carved frieze, representing the heads of oxen, with festoons of flowers pendant from the horns ; the frieze running round the entire building at a great elevation. In the hollow of the eye of one of these heads, a Sparrow built its nest. But amongst the materials which it employed for that purpose, there unhappily chanced to be a woollen thread, with a noose at one end. By some accident the poor little fellow, unfortunately got his own neck inserted in the noose ; and



in his efforts to extricate himself, fell from his nest, and hung suspended below it. He was observed for some time making prodigious exertions to escape, but in vain; and his remains are now to be seen, gibbeted at his own door, and fluttering in the wind, whilst the straws of his nest project from the eye-hole above his head."

The Sparrow, as before observed, is seldom seen far from the habitations of men; but as summer advances, and the young birds of the year are able to follow the old ones, they become gregarious, flying in flocks together to the nearest field of wheat, as soon as the corn is sufficiently hardened to enable them to pick it out, and here for a time they are in good quarters; but when the corn is housed, and the fields gleaned, their supply being thus cut off, they return to the vicinity of houses to seek again the adventitious meal which the habitations of men are likely to afford them.

The House Sparrow is common over the whole of the United Kingdom, including the islands of Orkney and Shetland; it is common also in Denmark, Norway, and Sweden, where, M. Nilsson says, it infests every house. From thence southward its range is extended to Spain, Portugal, and North Africa; in the south-east it is found in Italy, Corfu, Dalmatia, and the Ionian Islands. Mr. H. E. Strickland says, that our species,—for there are three others in Europe,—is the Common House Sparrow of the Levant; and the Zoological Society have received specimens from Trebizond and the Nubian Mountains. Colonel Sykes includes this species in his Catalogue of the Birds of the Dukhun, from whence he brought specimens, and it has also been received in this country from the Himalaya Mountains, from Nepal and the vicinity of Calcutta.

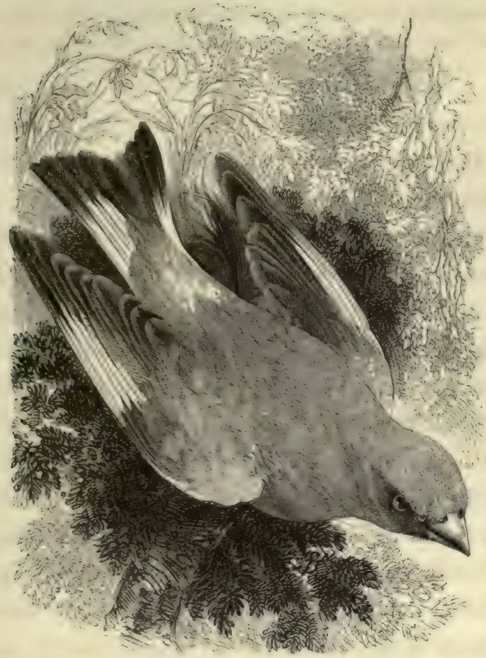
The beak of the adult male in summer is a bluish lead colour; from the base of the upper mandible to the eye a black streak; the irides hazel; top of the head bluish grey; over the ear-coverts, nape of the neck, back, and wings, rich rufous brown, the centre of each feather nearly black; some of the smaller wing-coverts tipped with white; the greater wing-coverts and tertials broadly edged with rufous brown; the primaries with narrow outer edges of brown; upper tail-coverts uniform pale brown; tail-feathers dark brown, edged with lighter brown; tail nearly square; the chin and throat black; cheeks and sides of the neck greyish white; breast dull greyish brown spotted with black; belly and under tail-coverts greyish white; legs, toes, and claws, brown.

The whole length rather more than six inches. From the carpal joint to the end of the wing, three inches: the first three quill-feathers nearly equal in length, but the second rather the longest; the fourth feather a little shorter than the third; the fifth more than one-eighth of an inch shorter than the fourth.

The female has the beak brown; the head and neck of a uniform brown colour; the edges of the feathers on the back and wings are buff colour; chin, throat, breast, and all the under surface of the body, pale wood-brown, rather darker in colour on the sides and flanks.

Black, white, and buff-coloured varieties of this species are not uncommon.

INSESSORES. *FRINGILLIDÆ.*
CONIROSTRES.



THE GREENFINCH,

OR GREEN GROSBEAK.

Coccothraustes chloris.

Loxia	*chloris,*	*Green Grosbeak,*	Penn. Brit. Zool. vol. i. p. 432.
,,	,,	,, ,,	Montagu, Ornith. Dict.
,,	,,	,, ,,	Bewick, Brit. Birds, vol. i. p. 164.
Coccothraustes	,,	,, ,,	Flem. Brit. An. p. 83.
,,	,,	,, ,,	Selby, Brit. Ornith. vol. i. p. 326.
Fringilla	,,	,, ,,	Jenyns, Brit. Vert. p. 136.
Coccothraustes	,,	,, ,,	Gould, Birds of Europe, pt. vii.
Fringilla	,,	*Gros-bec verdier,*	Temm. Man. d'Ornith. vol. i. p. 346.

Coccothraustes. *Generic Characters.*—Beak conical, very thick at the base, tapering rapidly to the point; culmen rounded; the commissure slightly arched; lower mandible nearly as large as the upper, its cutting edges inflected, and shutting within those of the upper. Nostrils basal, lateral, oblique, oval, nearly hidden by the short feathers at the base of the beak. Wings long, rather powerful, the second and third quill-feathers of nearly equal length, and rather longer than the first. Legs with the tarsi short, not exceeding the length of the middle toe; the outer toe longer than the inner one; claws sharp and curved, the hind toe and claw broad and strong. Tail short, and more or less forked.

The Greenfinch, or Green Grosbeak, as it is very commonly called from the great size of its beak, is one of our most common birds, and remains in this country throughout the year, changing its ground occasionally only to obtain a sheltered situation in severe weather. It frequents gardens, orchards, shrubberies, small woods, and cultivated lands, where these birds may be seen actively employed, sometimes on the ground, at other times in tall hedges, or among the branches of trees, searching for grain, seeds, or insects, to satisfy their appetite. The notes of this bird are harsh and monotonous, but it occasionally utters a few that may be called melodious; and, like many others of the Finches, when kept in confinement, it endeavours to imitate the song of any birds kept in the same room, and without many qualities to recommend it as a cage bird, it soon becomes tame and reconciled to its prison.

It is said to be rather a late breeder; but its nest may frequently be found towards the end of April in low bushes or hedges, and sometimes in trees. The nest is composed on the outside of coarse fibrous roots, with bits of wool and green moss interwoven, lined with finer roots, horsehair, and feathers. The eggs are from four to six in number, white, tinged with blue, the larger end spotted and speckled with purplish grey and dark brown; the length nine lines and a half, by six lines and a half in breadth.

The young birds are fed for a time with insects and soft vegetable substances, and as the season advances these little families unite, and flocking with Buntings and Finches, feed in corn fields and stubble lands till winter and its privations oblige them to resort to the farmer's barn-doors and stack-yard.

The Greenfinch is found generally in all the cultivated parts of England, Ireland, and Scotland, except, as stated by Mr. Macgillivray, the western and northern islands of Scotland. It is included by authors among the birds of Denmark, Norway, and Sweden; but according to M. Nilsson, it is more common in Sweden in winter than in summer. It is common in all the countries of southern Europe, on many of the islands of the Mediterranean, and is found even as far as Madeira. In a south-eastern direction it was observed by Mr. Strickland to be common at Smyrna.

M. F. H. Kittlitz, a distinguished naturalist, who went with a Russian Expedition in 1827 to the South Seas, in his published notes of the birds observed by himself, mentions at page 33, that he found this Greenfinch rather numerous in small flocks on the coast of Bonin, or, as it is named in some maps, Bonin-Siam, an island between four hundred and five hundred miles east of Japan. The birds inhabited tall woods near the shore; and M. Kittlitz adds, that they ran with facility, and searched for their food on the ground.

The adult male has the beak of a pale flesh colour; the irides hazel; the whole of the head, neck, back, and upper part of the wings olive green, or wax yellow; the exterior edges of the wings, from the carpal joint to the base of the primaries, gamboge yellow; the primaries greyish black, with brilliant gamboge yellow edges on two-thirds of their length, the outer third, forming the tip, of the same colour as the body of the feather; the greater wing-coverts and the tertials grey; the rump and upper tail-coverts of a brighter yellow than the body; the two middle tail-feathers shorter than the others, and greyish brown; the rest on each side have the basal half gamboge yellow, the terminal part greyish brown; the form of the tail forked; the chin, throat, breast, belly, and under tail-coverts, light wax yellow, inclining to grey on the sides of the body, and to gamboge yellow on the belly and under tail-coverts; the surface of the smaller under wing-coverts yellow; under surface of the basal half of the tail-feathers pale yellow, the ends grey. Legs, toes, and claws, pale wood-brown.

The whole length of an adult male bird, six inches to six inches and one quarter. From the carpal joint to the end of the wing, three inches and a half: the first three quill-feathers very nearly equal in length; the fourth one-eighth of an inch shorter than the third; the fifth one-quarter of an inch shorter than the fourth.

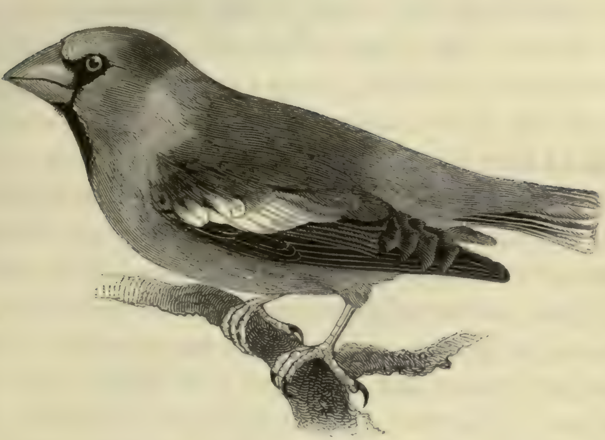
In the female, which is rather smaller than the male, the beak is pale brown; the general colour of the plumage hair-brown, tinged only with greenish yellow on the outer edges of the primaries, the rump, and base of the tail-feathers; the throat, breast, and belly, pale brown, the latter tinged with green; under tail-coverts pale brownish white; under wing-coverts tinged with yellow.

Young birds of the year in their first plumage are readily known by the elongated patches of brown which they bear at that period on the throat, breast, and belly; a few clouded spots are also to be seen on the back.

Young males after their first moult are intermediate in the general tone of colour between that of the adult male and the female, but the yellow colour on the primaries does not extend so far along each feather.

INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE HAWFINCH.

Coccothraustes vulgaris.

Loxia coccothraustes,	*Haw Grosbeak,*	Penn. Brit. Zool. vol. i. p. 421.
„ „	„ „	Montagu, Ornith. Dict.
„ „	*The* „	Bewick, Brit. Birds, vol. i. p. 162.
Coccothraustes vulgaris,	*Common* „	Flem. Brit. An. p. 82.
„ „	*Hawfinch,*	Selby, Brit. Ornith. vol. i. p. 324.
Fringilla Coccothraustes,	*Common Grosbeak,*	Jenyns, Brit. Vert. p. 136.
Coccothraustes vulgaris,	*Hawfinch,*	Gould, Birds of Europe, pt. v.
Fringilla coccothraustes,	*Le Grosbec,*	Temm. Man. d'Ornith. vol. i. p. 344.

The Hawfinch is described in most of our Ornithological works as an accidental visitor, appearing only in winter; but the increased attention bestowed upon the various branches of Natural History within the last few years, and the interest attached to an investigation of the habits of birds in particular, has led to more correct views on the subject; and this bird is now ascertained to exist even in very considerable numbers in many different localities, and to be resident there the whole of the year.

One of the best of the recently published accounts of this bird is in the first volume of the Magazine of Zoology and Botany. Mr. Henry Doubleday, the author of the paper, residing at Epping, within a short distance of Epping Forest, one of the localities in which these birds abound, says, "I have for some years past given close attention to their habits, and I can safely assert, that they are permanent residents, nor can I perceive any addition to their numbers by the arrival of foreigners at any period of the year.

"Their extreme shyness has no doubt contributed to keep us in ignorance of their habits and economy; in this trait they exceed any land bird with which I am acquainted, and in open places it is almost impossible to approach them within gun-shot. Their principal food here appears to be the seed of the Hornbeam, (*Carpinus betulus*, Linn.) which is the prevailing species of tree in Epping Forest; they also feed on the kernels of the haws, plum stones, laurel berries, &c., and in summer make great havoc amongst green peas in gardens in the vicinity of the forest."

"About the middle of April they pair, and in a week or two commence nidification. The situation of the nest is various; but is most commonly placed in an old scrubby whitethorn bush, often in a very exposed situation; they also frequently build on the horizontal arms of large oaks, the heads of pollard hornbeams, in hollies, and occasionally in fir trees in plantations; the elevation at which the nest is placed varying from five to twenty-five or thirty feet. The most correct description of the nest which I have seen is in Latham's Synopsis. It is there said to be composed of the dead twigs of oak, honeysuckle, &c. intermixed with pieces of grey lichen; the quantity of this last material varies much in different nests, but it is never absent; in some it is only very sparingly placed among the twigs; in others the greater part of the nest is composed of it; the lining consists of fine roots and a little hair. The whole fabric is very loosely put together, and it requires considerable care to remove it from its situation uninjured."

In a letter from Mr. Henry Doubleday, the situations of five nests are thus noticed; one was built in a whitethorn, one on the head of a pollard hornbeam, a third twenty-five feet from the ground on a spruce fir, the fourth on a tall red cedar, the fifth in a holly. Joseph Gurney Barclay, Esq., who lives at Leighton, on the London border of Epping Forest, pointed out to me a nest of this bird in an apple tree in his garden. This gentleman had also taken a nest from a tall whitethorn on the forest. The nest in this instance was formed of twigs laid across the branches in various directions as a frame-work or foundation of support; and the whole of the upper part was composed of gardener's bass, wreathed in circles, and mixed with a few fine roots. A nest brought to me, containing three eggs and one young bird, which was taken from a tall fir tree near Bexley, had a flat under surface of dead twigs of fir and birch, nearly as thick as a wheat straw, with fibrous roots and grey lichen laid flat upon them, the structure resembling the platform nests made by Doves and Pigeons.

Mr. Doubleday says, "The eggs vary in number from four to six, and are of a pale olive green, spotted with black, and irregularly streaked with dusky grey. Some specimens are far less marked than others, and I have seen some of a uniform pale green;" the length eleven lines by eight lines and a half in breadth.

"The young are hatched about the third week in May, and as soon as they are able to provide for themselves, they unite with the old birds in flocks, varying in numbers from fifteen or twenty to one hundred, or even to two hundred individuals. In this manner they remain through the winter, feeding on the hornbeam seeds which have fallen to the ground, the newly-cracked shells of which are to be seen in abundance at their haunts; the birds only separate at the approach of the breeding season. I believe the male has no song worth notice; in warm days in March I have heard them, when a number have been sitting together on a tree, uttering a few notes in a soft tone, bearing some resemblance to those of the Bullfinch."

A female in the possession of Mr. Bartlett sung the notes of the Linnet; but being afterwards hung out of doors, it learned to imitate the song of a Blackbird, though but indifferently; on the occurrence of the autumn moult this season she discontinued her imitations of the Blackbird's song, and seemed afterwards to have forgotten it.

Mr. Doubleday remarks, "that although so common in his neighbourhood, the Hawfinch is but little known, which is to be attributed to its shy and retired habits." These birds generally perch on the highest branches of a tree, or upon a dead or naked bough, from whence they keep so good a look out that it is very difficult to get near them.

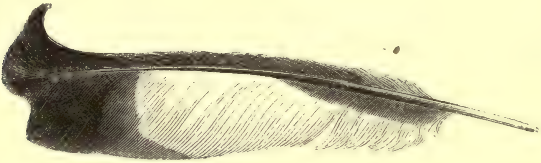
I have known a Hawfinch to be shot as near London as Notting Hill, and two others were caught in that neighbourhood by a bat-fowling net. Mr. Jesse, in his instructive Gleanings, says that this bird breeds about Roehampton, and refers to one nest that was found in the grounds of Lord Clifden, at the extremity of a branch of a horse-chestnut tree near the lodge, and it has been known to build in other localities in Surrey but a few miles from London. Mr. H. L. Meyer, the author of Coloured Illustrations of British Birds, now in course of publication, gave me a specimen which was shot near Esher. In Kent this species is observed to exist in considerable numbers at Dartford, and about Maidstone. Mr. Gould says that it is abundant on the estate of W. Wells, Esq. at Redleaf, near Penshurst, that gentleman having, with the assistance of a small telescope, counted eighteen at one time on his lawn. The bird figured many years ago by Edwards in his Gleanings of Natural History, was killed at Goodwood in Sussex. They have been known to breed near Windsor, and young birds were obtained when paying their daily visits to some young peas in a garden, which from concurring testimony appear to be much sought after by these birds as food in summer. They have been noticed about Chipping Norton in Oxfordshire, and repeatedly seen by Gilbert White at Selborne in Hampshire. It has been obtained occasionally in Dorsetshire, Devonshire, and in the eastern as well as western part of Cornwall. According to Pennant, Montagu, and Mr. Eyton, it occurs in winter in Gloucestershire and Shropshire ; it has been met with at Ormskirk in Lancashire, and one was seen frequently in the spring of 1833 about the gardens and pleasure grounds at Woodside, four miles south of Carlisle. Mr. Thompson sends me word that the Hawfinch has in a very few instances been obtained in different parts of Ireland.

Eastward and northward from London this bird is most plentiful in the vicinity of Epping Forest, and is found as far towards the east coast as Manningtree. It occurs in Suffolk, Cambridgeshire, Norfolk, and occasionally about York ; but is not included by Mr. Selby in his Catalogue of the Birds of Durham and Northumberland. Sir

William Jardine sends me word that it has been once or twice killed in Dumfriesshire, but it is not common in Scotland.

The Hawfinch is included by Müller among his birds of Denmark, and by Professor Nilsson in those of Sweden and of Scandinavia generally, but it is considered rare; it occurs sparingly in Russia, but is found in Siberia and Northern Asia. On the European continent, it is plentiful, in Germany, France, Spain, and Italy, Corfu, Sicily, and Malta. M. Temminck includes the Hawfinch in his Catalogue of the Birds of Japan, and the Zoological Society have very recently received a skin of this bird from China.

The beak of the adult male in summer is blue, around the base is a line of black, which on the lore reaches to the eye; the irides greyish white; the top of the head, cheeks, ear-coverts, and nape of the neck, fawn colour, lightest on the forehead and cheeks, darkest on the nape of the neck; lower part of the neck above grey; upper part of the back, scapulars, and part of the tertials, rich chestnut brown; smaller wing-coverts black; larger wing-coverts white, except the three nearest the body of the bird, which are fawn colour; quill-feathers bluish black, with more or less white on the inner webs; the fifth and four succeeding primaries singularly formed, like an antique battle or bill-hook,—a figure of a feather is given;



the other quill-feathers nearer the body are square at the end; rump and upper tail-coverts fawn colour; the outside tail-feather on each side black at the base and on the outer web, the distal half of the inner web white; the next four on each side also black at the base, with the ends of both webs white, the proportion of white diminishing in each feather; the two centre tail-feathers rather shorter than the others, and greyish brown, tipped with white; chin and throat velvet black: sides of the neck, the breast, and belly, pale nutmeg brown; under tail-coverts white; legs, toes, and claws, pale wood-brown.

The whole length of the bird full seven inches. From the carpal joint to the end of the wing, four inches: the first three quill-feathers very nearly equal in length, but the second rather the longest of the three; the fourth one-eighth of an inch shorter than the third; the fifth three eighths of an inch shorter than the fourth.

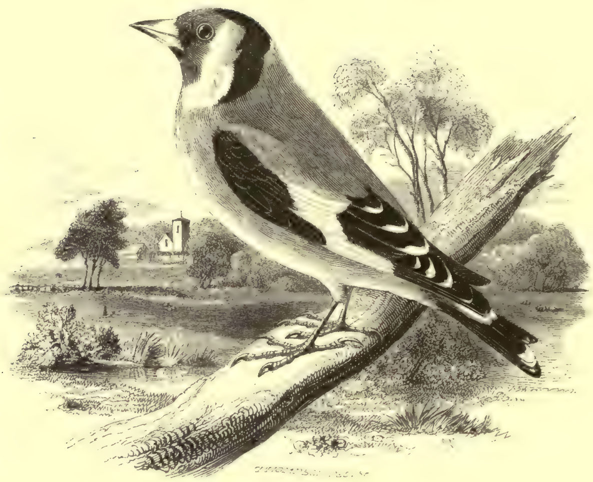
In the female, the black at the base of the beak and on the lore, or space between the beak and the eye, is much less conspicuous than in the male; the black patch on the chin is also of smaller size; the colour of the head, neck, and back, less pure, and blending more with each other; the white colour on the larger wing-coverts more mixed with brown, and the outer webs of the tertials are bluish grey.

In the young bird, and in the old ones during winter, the beak is of a fleshy red colour, but inclining to pale brown on the ridge of the upper mandible; the head, neck, and upper parts, yellowish olive brown; the bar on the wing less conspicuous; the throat yellow, bounded by a small line of brown spots, which indicate the outline of the black patch on the throat of adult birds; under surface of the body pale yellowish brown, each feather tipped with darker brown.

The nest is figured at page 549.

INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE GOLDFINCH.

Carduelis elegans.

Fringilla carduelis,	*The Goldfinch,*	PENN. Brit. Zool. vol. i. p. 447.
" "	"	MONTAGU, Ornith. Dict.
" "	"	BEWICK, Brit. Birds, vol. i. p. 195.
" "	"	FLEM. Brit. An. p. 85.
Carduelis elegans,	"	SELBY, Brit. Ornith. vol. i. p. 312.
Fringilla carduelis,	"	JENYNS, Brit. Vert. p. 137.
Carduelis elegans,	"	GOULD, Birds of Europe, pt. xiv.
Fringilla carduelis,	*Gros-bec chardonneret,*	TEMM. Man. d'Ornith. vol. i. p. 376.

CARDUELIS. *Generic Characters.*—Beak lengthened, conic, compressed; the point attenuated and acute; commissure slightly curved. Nostrils basal, lateral, covered by small incumbent plumes. Wings lengthened, pointed; the first, second, and third quills nearly equal, and longest. Tail moderate, slightly forked. Feet with the middle toe longer than the tarsus, which is equal to the hind toe; lateral toes short, of equal length; claws slender, curved and acute.

THE genus *Carduelis* was proposed by Brisson for the reception of the Goldfinch, and other allied species, of which many are known; and this distinction has received the sanction, by adoption, of Baron Cuvier, and several other naturalists. These birds belong to M. Temminck's third section of the Finches, *Gros-bec*, distinguished by the term *Longicones*.

Gay plumage, lively habits, an agreeable form and song, with a disposition to become attached to those who feed them, are such strong recommendations, that the Goldfinch has been, and will probably long continue to be, one of the most general cage favourites. So well also do the birds of this species bear confinement, that they have been known to live ten years in captivity, continuing in song the greater part of each year. This tendency to sing and call make them valuable as brace birds, decoy birds, and call birds, to be used by the bird-catcher with his ground nets; while the facility with which others are captured, the numbers to be obtained, and the constant demand for them by the public, render the Goldfinch one of the most important species included within the bird-dealer's traffic.

Goldfinches, and the small Finches generally, are also favourites on another account: they are taught, without much difficulty, to perform a variety of amusing tricks, such as to draw up water for themselves by a small thimble-sized bucket, or to raise the lid of a small box to obtain the seed within. Mr. Syme, in his History of British Song Birds, when speaking of the Sieur Roman, who some years since exhibited Goldfinches, Linnets, and Canaries, wonderfully trained, relates, that one appeared dead, and was held up by the tail or claw, without exhibiting any signs of life; a second stood on its head with its claws in the air; a third imitated a Dutch milk-maid going to market with pails on its shoulders; a fourth mimicked a Venetian girl looking out at a window; a fifth appeared as a soldier, and mounted guard as a sentinel; and the sixth acted as a cannoneer, with a cap on its head, a firelock on its shoulder, and a match in its claw, and discharged a small cannon. The same bird also acted as if it had been wounded. It was wheeled in a barrow, to convey it, as it were, to the hospital; after which it flew away before the company. The seventh turned a kind of windmill; and the last bird stood in the midst of some fireworks which were discharged all round it, and this without exhibiting the least symptom of fear.

In spring, and the early part of summer, the Goldfinch frequents gardens and orchards. Hurdis, in his Evening Walk, says—

> "I love to hear the Goldfinch twit and twit,
> And see him pick the groundsel's feathered seeds;
> And then in bower of apple blossom perched,
> Trim his gay suit, and pay us with a song."

The Goldfinch builds a very neat nest, which is sometimes fixed in an apple or pear tree; occasionally in a hedge, or thick bush in a small copse, or an evergreen in a plantation. A nest now before me is formed on the outside with fine twigs of fir, green grass bents, fine roots, some wool, and several pieces of white worsted, curiously interwoven together; lined with willow down, feathers, and numerous long hairs. It has been well observed, "that birds will in general take the materials for building which they can most easily procure." Bolton, in the preface to his *Harmonia Ruralis*, says, "I observed a pair of Goldfinches beginning to make their nest in my garden, on the 10th of May 1792; they had formed the groundwork with moss, grass, &c., as usual; but on my scattering small parcels of wool in different parts of the garden, they in a great measure left off the use of their own stuff, and employed the wool. Afterwards I gave them cotton, on which they rejected the wool, and proceeded with the cotton; the third day I supplied them with fine down, on which they forsook both the other, and finished their work with this last article. The nest, when completed, was somewhat larger than is usually made by this bird, but retained the pretty roundness of figure and neatness of workmanship which is proper to the Goldfinch. The nest was completed in the space of three days, and remained unoccupied for the space of four days, the first egg not being laid till the seventh day from beginning the work." The eggs are four or five in number, pale bluish white, with a few spots and lines of pale purple and brown; the length eight lines and a half, the breadth six lines.

The young birds are fed for a time with caterpillars, and other insects, and when able to follow their parents, they rove together in small flocks over commons, and other uncultivated lands to feed on the ripened seeds of the thistle, burdock, or dandelion, with chickweed, groundsel, or plantain. If watched while thus feeding, they may be seen climbing and clinging in all directions and positions about the stems, picking out their favourite portions. If approached too near, the little party, one by one, move off to the next nearest patch, with undulating flight, twittering as they rise—

> "Each outstretched wing
> A fairy fan, with golden sticks adorned,"

and thus roving in small flocks, through the autumn and winter, living almost entirely on various seeds, particularly those of the different species of thistle, they perform good service to the agriculturist by consuming the prolific source of many a noxious weed.

The Goldfinch is found in numerous localities, both in England and Wales; it occurs, according to Mr. Thompson, in certain parts of Ireland; and as an inhabitant of the south of Scotland, is mentioned by Sir Robert Sibbald, Sir William Jardine, and Mr. Macgillivray.

It is found in Sweden, and is said to be found also in Europe from Siberia to the Grecian Archipelago. It is certainly abundant in Germany, France, Provence, Spain, and Italy; it is found also at Corfu, Sicily, Malta, and Crete; Mr. Strickland says it is common at Smyrna, and the Zoological Society have received specimens sent by Keith Abbott, Esq., from Trebizond.

The beak is whitish horn colour, black at the tip; irides dusky brown; the whole circumference at the base of the beak crimson red; cheeks and ear-coverts white; top of the head black, which colour descends from the occiput in a band on each side of the neck; nape of the neck below the occipital band white; back, scapulars, and rump, dusky wood-brown; carpal portion of the wing, and the smaller wing-coverts, black; greater wing-coverts, and the outer edge of the basal half of each primary, brilliant gamboge yellow; the remaining portion of the primaries, and nearly all the other quill-feathers black; the tertials with a spot of white at the tip; upper tail-coverts greyish white: tail-feathers black; the outer feather on each side with an oval-shaped spot of white on the inner web; tail in form slightly forked. Chin, as before remarked, crimson red, around it white; the whole of the under surface of the body dull white; tinged on the sides of the neck, the throat, on the breast, sides of the body, and on the thighs, with wood-brown; under wing-coverts white; legs and toes pale flesh colour; claws brown.

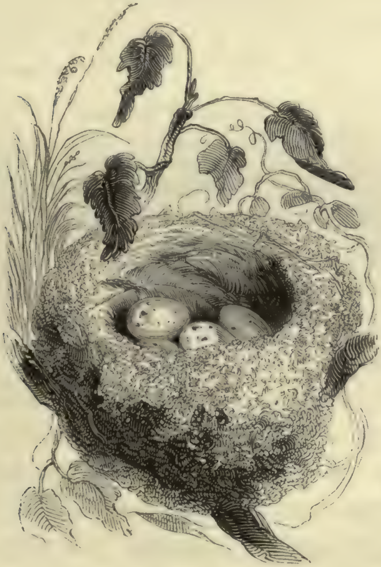
The whole length of the bird five inches. From the carpal joint to the end of the wing, two inches and seven-eighths: the first, second, and third quill-feathers, nearly equal in length, the first rather the longest; the fourth, one-eighth shorter than the third.

In the females, the red on the forehead and chin occupies smaller space, and is frequently speckled with black; the lesser wing-coverts are brown, and the other colours generally are less brilliant.

In young birds of the year, which for distinction's sake are called by the bird-catchers and bird-dealers, Branchers, the whole of the head, neck, back, and sides of the chest, are nearly uniform greyish brown; the other parts resemble in colour those of the female. "The black begins to appear on the head of the young Goldfinches about the middle of September, and the red at the end of that month. On one which was kept in confinement, the black colour first showed itself on the 1st of October, and was perfect on the first of November; the face was covered with a dull orange, much mixed with black; it is some time before the head assumes its perfect covering." *

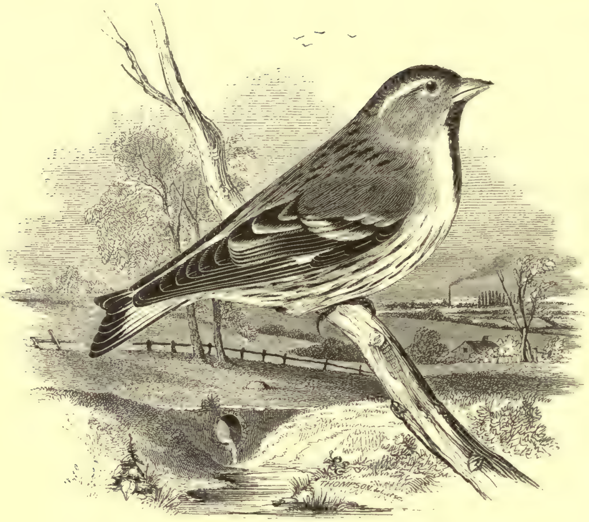
---

* Field Naturalist's Magazine.



INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE SISKIN.

Carduelis spinus.

Fringilla spinus,	*The Siskin,*	Penn. Brit. Zool. vol. i. p. 405.
" "	"	Mont. Suppl. to Ornith. Dict.
" "	"	Bewick, Brit. Birds, vol. i. p. 197.
" "	"	Flem. Brit. An. p. 85.
Carduelis "	"	Selby, Brit. Ornith. vol. i. p. 309.
Fringilla "	"	Jenyns, Brit. Vert. p. 137.
Carduelis "	"	Gould, Birds of Europe, pt. vii.
Fringilla "	*Gros-bec tarin,*	Temm. Man. d'Ornith. vol. i. p. 371.

The Siskin, or Aberdevine, as it is also called, is a visitor to this country, arriving in flocks from the North in autumn, and comes generally in company with the Lesser Redpole, to be hereafter described, many of which also pass the summer in high northern latitudes. The Siskin appears to be much more plentiful in the North than with us in the South; and there seems to be no doubt that some, perhaps many, pairs remain and breed annually in or about the fir-woods and plantations of the northern counties of England and Scotland, some recorded instances of which will be referred to. Although greatly reduced in numbers before these flocks arrive in the southern counties, the Siskin is not uncommon from September to April, and is most frequently seen in small flocks, sometimes by themselves, but more frequently in company with Linnets and Redpoles, twittering almost incessantly as they fly, apparently for the purpose of keeping them together, while they search the alder, birch, and larch for seeds as food; their voice also very much resembling that of the Lesser Redpole.

Although this bird has been known to breed in three or four different localities in the northern parts of this island; and has been seen during the breeding-season in others; it is seldom found south in the summer, or after the month of April, about which time it departs for the North; and I have only heard of two instances of its remaining to breed near London. Mr. Meyer informs me that the Siskin has built twice in furze, about three feet from the ground, near Coombe Wood; the eggs were taken in both instances; they were hatched by Canaries, and some of the young were reared, so that no doubt remained of the species. With care, and some attention to their particular wants, the Siskin has bred in confinement with several persons; and these birds are in some request with London bird-dealers, who pair the Siskin with a Canary, and by that means obtain a bird whose song, unlike that of most Canaries, is not too loud for a room.

In Surrey, Sussex, Dorsetshire, and Devonshire, this bird is seen more or less frequently from Michaelmas to April, in Cornwall it is more rare; but Mr. Couch, in his Cornish Fauna, mentions having had a young specimen of the year brought alive to him on the 31st of October, 1835.

Mr. Eyton says it is common in Shropshire, mostly in company with the Little Redpole; and Mr. Thompson says it is an occasional winter visitor to Ireland. From London the numbers of this bird increase as we proceed northward, and they are almost always seen in flocks in winter, and feeding on the seeds of the alder. In Suffolk and Norfolk, they are at times abundant. Dr. William Turner, who published his *Avium Præcipuarium*, &c. in 1544, mentions having then seen the Siskin in the fields of Cambridgeshire, and the Rev. L. Jenyns also records their appearance in the same county at the present time. They are not uncommon in winter in Lincolnshire and Yorkshire; and Mr. Selby observes them to be more or less abundant every winter in Durham and Northumberland. Mr. Howitt, jun. of Lancaster, sends me word that large flocks, containing several hundred birds, have of late years been seen there during winter; a few remained in the summer of 1836 to breed, six pair of old birds were seen about, and later in the season several young ones.

Sir William Jardine, in a note appended to the description of the American Siskin, in the first volume of his edition of Wilson's American Ornithology, says of our British species, " A few pairs not performing the migration to its utmost northern extent, breed in the larger pine woods in the Highlands of Scotland. In 1829 they were met with in June, in a large fir wood at Killin, evidently breeding; last year they were known to breed in an extensive wood at New Abbey in Galloway. In their winter migrations they are not regular, particular districts being visited by them at uncertain periods. In Annandale, Dumfriesshire, they were always accounted rare; and the first pair I ever saw there was shot in 1827. Early in October, as the winter advanced, very large flocks arrived, and fed chiefly upon the ragweed, and under some large beech trees, turning over the fallen mast, and eating part of the kernels, as well as any seeds they could find among them. In 1828 they again appeared; but in 1829 not one was seen. In the winter of 1830 they were equally wanting."

Mr. Drew of Paisley says, "Early in June 1833, at which time I resided at Inverary, I went out one morning to fish, and, according to my usual practice, I carried a light gun with me. I was rather surprised, at that season, to see a pair of Siskins among some furze bushes, on the shore of Lochfine, and the birds being close together, I killed both. On dissecting the female, an egg was found ready for exclusion, and I never had any doubt but that the birds were breeding in the neighbourhood, though I did not look for, or see, the nest. It is very likely that it was in some of the spruces, which were the predominant trees in the place. I subsequently secured a pair of Siskins in the same locality."

A correspondent residing in the Vale of Alford, Aberdeenshire, thus notices in Mr. Loudon's Magazine of Natural History, vol. vi., the appearance of the Siskin in the breeding season. "A gentleman in the neighbourhood observed some about the middle of May; the first that I noticed was on the 27th: it was picking seeds of grass on the edge of the road, and was not at all shy; I saw others afterwards, at different times and places, till the end of June."

William Gardiner, Esq. jun. of Dundee, says of the Siskin, "occasionally a pair or two linger with us during the breeding season, and produce their young. Near the end of May 1834, a nest full of young ones was found in Camperdown Woods; the nest was situated close to the trunk, at the insertion of a branch of a spruce fir, about six feet from the ground. It was composed of materials similar to those used by the Chaffinch, and contained three birds covered with a black down. The old ones were also taken."—Loudon's Magazine, vol. viii. This gentleman has succeeded in breeding and rearing Siskins in confinement, and states that incubation lasts fourteen days; the young were fledged in fifteen days, and left the nest at the end of the third week.

This species inhabits Scandinavia, and the southern provinces of Russia; is said to breed occasionally in Germany, but is a visitor for the winter, appearing in autumn in Holland, France, Provence, and Italy. M. Temminck states that specimens received from Japan resemble our Siskin in every particular.

The adult male in summer has the beak orange brown; the top of the head velvet black; the lore, or space between the beak and the eye, is also black; the irides dusky brown; the cheeks and ear-coverts yellowish green; back and scapulars greenish olive, streaked longitudinally with dusky black; small wing-coverts black, tipped with yellow; greater wing-coverts yellow at the base, tipped with black; quill-feathers dusky black, edged with yellow; rump and upper tail-coverts yellow; tail-feathers yellow at the base, dusky black at the end, with narrow light-coloured edges; the tail slightly forked. Chin black; throat, breast, and belly, yellowish green, streaked longitudinally with dusky black on the sides, flanks, and belly; under tail-coverts greyish white; legs, toes, and claws, brown.

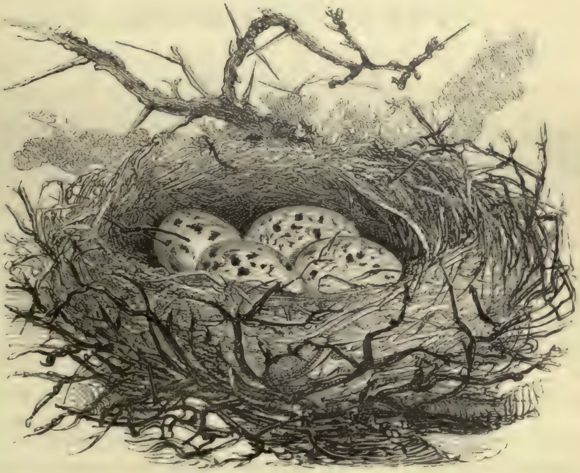
The whole length of the bird four inches and five-eighths. From the carpal joint to the end of the wing, two inches and seven-eighths: the first three quill-feathers nearly equal in length, and the longest in the wing, the first being rather the longest of the three; the fourth one-eighth shorter than the third.

At the moult which follows the breeding season, the yellow colour is much less brilliant, and the feathers of the head are brownish at the end, hiding the black at the base. The plumage becomes much richer towards the season of incubation. The black parts become deeper, and the olive of a yellower green.

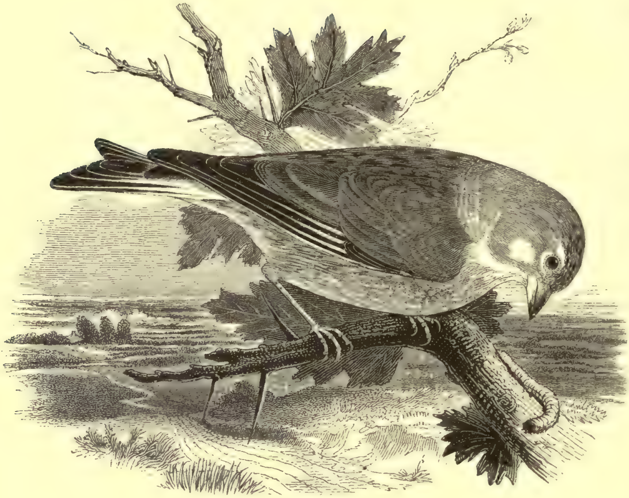
The female is smaller than the male, measuring from four inches and a quarter to three-eighths in length; the head, back, and upper part of the wings greyish olive brown, streaked with dusky black; under parts greyish white, streaked with dusky black, and tinged with greenish yellow on the throat and breast.

Young males after their first moult have the black feathers on the head margined with brown, and the colours, though brighter than those of the female, are not so vivid as those of the adult male.

The nest below is that of the Hawfinch.



INSESSORES. *FRINGILLIDÆ.*
CONIROSTRES.



THE COMMON LINNET.

Linota cannabina.

Fringilla	*linota,*	*Linnet Finch,*	Penn. Brit. Zool. vol. i. p. 462.
,,	*cannabina,*	*Red-headed Finch,*	,, ,, ,, 464.
,,	*linota,*	*Brown Linnet,*	Mont. Ornith. Dict.
,,	*cannabina,*	*Greater Redpole,*	,, ,,
,,	*linota,*	*The Linnet,*	Bewick, Brit. Birds, vol. i. p. 205.
,,	*cannabina,*	*Greater Redpole,*	,, ,, ,, 201.
,,	,,	*Brown Linnet,*	Flem. Brit. An. p. 84.
,,	,,	*Common* ,,	Jenyns, Brit. Vert. p. 139.
Linaria	,,	,, ,,	Selby, Brit. Ornith. vol. i. p. 315.
,,	,,	,, ,,	Gould, Birds of Europe, pt. xviii.
Fringilla	,,	*Gros-bec linotte,*	Temm. Man d'Ornith. vol. i. p. 364.

Linota. *Generic Characters.*—Beak straight, conical, pointed. Nostrils basal, lateral, concealed by short feathers. Wings long, somewhat pointed; the first, second, and third feathers nearly equal in length. Tarsi short; feet with lateral toes of equal length; the hind toe and claw as long as that in the middle; claws slender, acute, and curved. Tail forked.

The propriety of advancing the Linnets, of which there are many species, to generic distinction among the Finches, appears to be admitted by many of the naturalists of the present day; but the term *Linaria*, which has latterly been applied to them, has been considered objectionable and even inadmissible, from the circumstance of this word having been employed in botany more than two hundred years.*

From the great changes which our Common Linnet undergoes at different periods of the year, it was long supposed that there were two species included under this name, and the specific terms *linota* and *cannabina* were applied to them, as a reference to the synonymes of Pennant, Montagu, and Bewick, here quoted, will show. These seasonal changes and appearances are now better understood, and in the case of our Common Linnet, under consideration, are known to constitute only the summer and winter plumage of the same individual species. It is obviously an advantage to combine the two specific words by which the Linnet has hitherto been systematically known, and I therefore adopt the term *Linota* for the generic term, as proposed by Charles Lucian Bonaparte, Prince of Musignano, in his Geographical and Comparative List of the Birds of Europe and North America. One other additional advantage is also gained;—our Lesser

---

* The term *Linaria* was employed in Botany to distinguish certain species of toadflax, by Fabius Columna, who published in 1616, and this word was probably so used even before that date. It was again made use of by Caspar Bauhim in his *Pinax*, published in 1671. In 1699 this word was adopted by Tournefort, in his *Institutiones Rei Herbariæ*, and the characters of the genus are beautifully illustrated in Tab. 76 of that work; seven species were then described as belonging to this genus, and the name was continued by Jussieu in his *Genera Plantarum*, published in 1789. Linnæus did not adopt the genus *Linaria*, but included the species in his genus *Antirrhinum;* in this arrangement, however, the example of Linnæus has not been followed by systematic botanists, who still continue to use and refer to the generic term *Linaria.*

Redpole will still retain the specific name of *linaria*, by which it has been so long known, and thus another change will be avoided.

Our Common Linnet, which, assuming in the breeding season a red colour on the breast, is then called the Rose Linnet, and at other times the Brown Linnet, is a well known species, existing in great numbers on most of the uncultivated lands of this country, appearing to prefer commons and fields of furze. The gay and active habits of this species, their sprightly and agreeable notes, would enliven a dreary scene, while their social disposition in confinement render them great favourites with those who are partial to caged birds. Except during the breeding season, these birds are usually seen in flocks, roving from place to place, feeding generally upon small seeds, particularly those of the cruciform plants, with other seeds of flax,* thistle, and dandelion.

In the pairing season, the thickest parts of furze bushes are generally selected as the place for incubation, and the birds begin building early in spring. The nest is usually formed of small twigs on the outside, with bents of grass, lined with wool, and sometimes with the addition of hair or feathers. I have known the Linnet's nest to be placed high in a whitethorn bush, and I have a note of one that was found in a fir tree, ten or eleven feet above the ground. The eggs are four or five in number, of a pale bluish white colour, speckled with pale purple and reddish brown; the length nine lines, by six lines and a half in breadth.

When the broods are reared, and the summer over, these birds again flock together, feeding on the stubble grounds, and waste lands; and in the maritime counties, Mr. Selby observes, that in winter these flocks descend to the sea coast, where they continue to reside till returning spring again urges them to pair.

---

* The Linnets were probably so named from their partiality to the seeds of the various species of flax,—*Linum*, *Linaria*, *Linota*, La Linotte, Linnet.

The Linnet, generally distributed over England, is also common in Ireland, as I learn from Mr. Thompson; and Sir William Jardine sends me word that it is common during summer in the whin covers, and occurs in large flocks during winter on the stubbles and fallows: it is found also in the south and east of Scotland. Mr. Selby observed it in summer in Sutherlandshire; and the Rev. Mr. Low says it is abundant in Orkney and Shetland. The Linnet is an inhabitant of Denmark, Norway, Sweden, and the southern provinces of Russia, where it remains all the year. It is found from thence over the whole of the European Continent to the southward; it is very common in France, Provence, Spain, and Italy; it is found in Corfu, Sicily, Malta, Crete, the Levant and at Smyrna; the Zoological Society have received specimens sent by Keith Abbot, Esq., from Erzerum, about a hundred miles south-east of Trebizon, on the shores of the Black Sea; and M. Temminck includes it in his Catalogue of the Birds of Japan.

The male of the Common Linnet in summer has the beak of a bluish lead colour; the irides hazel; the feathers of the fore part and top of the head greyish brown at the base, but vermilion red at the tip; round the eye, the ear-coverts, and back of the neck, greyish brown; the whole of the back, wings, and upper tail-coverts, uniform rich chestnut brown; quill-feathers nearly black, with very narrow outer margins of white; tail-feathers black, with narrow outer edges, and broader inner edges of white; tail rather forked; chin and throat a mixture of brown and grey; breast vermilion red, with a few pale brown feathers intermixed; belly and under tail-coverts pale wood-brown; the flanks darker yellowish brown; the under surface of the tail-feathers when spread out exhibits a series of grey and white longitudinal bars; legs, toes, and claws, brown.

The whole length of the bird five inches and three-quarters. From the carpal joint to the end of the wing-feathers, three inches and one-eighth; the first three quill-feathers nearly equal in length, but the first rather the longest; the fourth feather one quarter of an inch shorter than the third.

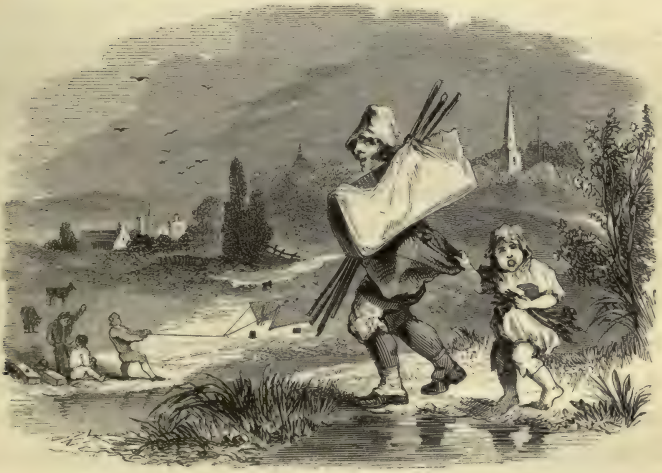
In autumn and winter these birds have no red colour on the head or breast; the beak is brownish horn colour; the feathers of the head, cheeks, and ear-coverts, dark brown, with lighter greyish brown edges; back, wings, and tail-coverts, dark brown, the margin of each feather being lighter in colour, but with less of the rich chestnut colour observed in summer; quill and tail-feathers as in winter; throat, breast, belly, and under tail-coverts, pale wood-brown, with conspicuous longitudinal streaks of dark brown on the breast.

Males do not in confinement acquire the fine red colour which pervades the breast of a mature wild bird; and a female has been taken bearing a fine red breast, but this is not generally the case. The particular plumage, however, assumed during the breeding season by many species being a periodical indication of constitutional and sexual vigour is borne in degree by both sexes.

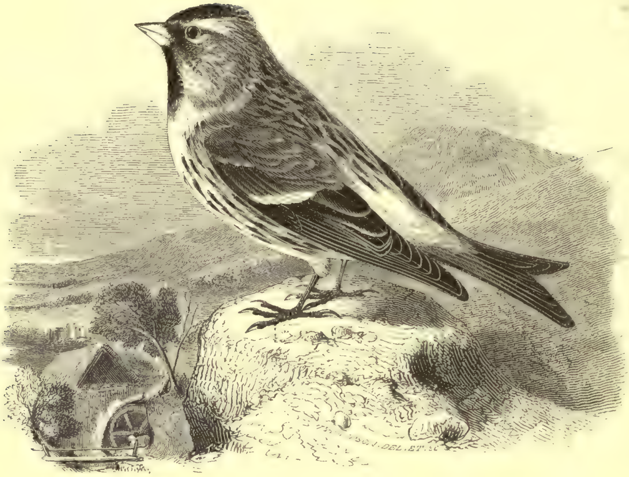
The female Linnet is a little smaller than the male, and has the upper surface of the body rather lighter in colour, and more varied with dark brown patches; the under surface of the body slightly tinged with rufous, and streaked with brown.

Young birds resemble the females, and have the breast, belly, and flanks, streaked longitudinally with brown.

The vignette below represents the mode of working the clap-net, a particular sort of ground-net in constant use among London bird-catchers. It consists of two equal parts, or sides, each about twelve yards long, by two yards and a half wide, and these two sides are by an ingenious contrivance pulled over together towards each other, so as to cover the oblong space between their points of motion, which are in parallel lines nearly as far apart as the width of both halves of the net. Various call-birds, either fixed by braces, or confined in small cages, are placed about the net to decoy the wild birds down that come within sight or hearing. One bird-catcher is represented in the act of pulling the two halves of the net over to enclose and entrap the birds between them; the figure in the foreground, with his nets packed at his back, exhibits the convenient portability of the materials.



INSESSORES. *FRINGILLIDÆ.*
CONIROSTRES.



THE MEALY REDPOLE.

Linota canescens.

Linaria canescens,	*Mealy Redpole,*	GOULD, Birds of Europe, pt. xi.
" "	" "	EYTON, Rare Brit. Birds, p. 19.
" *borealis,*	" "	MACGILLIV. Brit. Birds, p. 388.
Fringilla "	*Gros-bec Boreal,*	TEMM. Man. d'Ornith., pt. iii. p. 264.
Linota canescens,		BONAP. Catalogue, p. 34.

THE MEALY REDPOLE, figured above, has been considered by several Ornithologists to be merely a large variety of the Lesser Redpole, *L. linaria*, next to be described; but sufficient evidence appears to exist to entitle this bird to specific distinction, and the synonymes of those authors who have hitherto considered it only as a variety are here omitted. The Mealy Redpole is figured as a species by John Walcott, Esq., in his Synopsis of British Birds, and it now ranks as a species in the works of Charles Lucian

Bonaparte, Prince of Musignano, of Mr. Gould, and Mr. Eyton. By the synonyme quoted in his work, Mr. Macgillivray appears to consider our Mealy Redpole as identical with the *Fringilla Borealis* of the third part of M. Temminck's Manual, and the description there given of the plumage in its various states very closely resembles that of our bird. The Lesser Redpole of this country has been considered identical with the Redpole of North America; but, according to the testimony of Mr. Gould, the North American bird appears to be the *L. canescens*, or Mealy Redpole rather than the Lesser Redpole of authors; and the measurement given in the different works on the Birds of North America, approach nearer to those of our Mealy Redpole than to the lesser bird. Mr. Gould, in the article on the Mealy Redpole in the eleventh part of his Birds of Europe, says, "Whether this species is truly a native of Europe, or whether those which occur in our island are arrivals from the northern portions of the American continent, is a matter of doubt; true it is that the specimens brought home by Dr. Richardson, which furnished the descriptions given in the *Fauna-Boreali Americana*, are strictly identical with the bird before us." The Prince of Musignano includes two species of Redpole in his Catalogue of the Birds of North America, *Borealis* and *Linaria.*

To return, however, to our English species: the Mealy Redpole, or Stone Redpole, as it is also called, is well known to the London dealers in birds, and considered by them as distinct from the Lesser Redpole; but the occurrence of the Mealy Redpole in the vicinity of London is rare even to those men who, obtaining their livelihood by bird-catching, trap hundreds of dozens of birds in the course of the year. The Lesser Redpole, on the contrary, is very common. A respectable dealer in birds tells me that about twenty-three years ago, the Mealy Redpoles were very abundant for a time; but not a single Lesser Redpole scarcely was then to be got; and Mr. Gould mentions that in the year 1829, the Mealy Redpoles were again particularly abundant, and were caught in great numbers.

The best specimens I possess of this bird were given me by my friend Mr. Henry Doubleday of Epping, who supplied me also with the following observations. "During a visit to Colchester in January 1836, I observed some Redpoles feeding on the alder, in company with the Siskin. On shooting some, they proved to be the Mealy Redpole, and I am convinced were all of this species, as I could plainly see their pale or nearly white rumps. A friend from Colchester brought me a pair alive; these I kept some time, and there was certainly a difference in their note, being sharper; but as they had been kept some weeks with a number of Canaries, I thought it possible that the Mealy Redpoles had caught part of the Canary's note. When I was at Colchester, I could form no opinion of the Mealy Redpole's note in a wild state, from the continual chatter of the Siskins. In Charles Lucian Bonaparte's Catalogue of the Birds of Europe and North America, three Redpoles are given, viz., our common one, *Linota linaria*, *Linota canescens*, Mr. Gould's plate of the Mealy Redpole being referred to for this species, and *Linota Borealis*, which is stated to inhabit Europe generally; now I always thought that the *Borealis* of M. Temminck was our Mealy Redpole. When skinning this bird, the head has always appeared to me broader than that of the common species; but I am sorry that I have not a skull to make the comparison, as I have had so few specimens of the Mealy bird." This desideratum, in further proof of the distinction between this bird and our common Redpole, I am, however, enabled to supply from another quarter. Mr. Pelerin, a Naturalist, living in Great Russell Street, who has prepared for himself an extensive collection of the crania and skeletons of animals, has most freely allowed me the use of a cranium of each of our Redpoles from which the representations forming the subject of the vignette at the end of the account of the next Redpole were carefully drawn; where, in addition to the side and back view of each, the double parallel lines exhibit at once the comparative length and breadth of each head.*

In the Museum at Saffron Walden, there is a male of the Mealy Redpole, which was killed in that neighbourhood in May 1836, and one shot by Mr. Pelerin at Oundle was sufficiently advanced in its spring plumage to have acquired a considerable portion of red colour on the breast; the occurrence of this species, for such I consider it, is, however, most frequent in winter; many specimens have been obtained in England, and some in Scotland. Its habits throughout the year are probably very similar to those of the Little Common Redpole next to be described, and with which it has frequently been confounded. Its food is the seeds of various forest trees.

Thinking it not improbable that the Mealy Redpole, named *canescens* by Mr. Gould, as here quoted, may be the same bird as that which has been called *Borealis* by Messrs. Temminck and P. Roux,—the eleventh part of Mr. Gould's Birds of Europe having been published, I believe, before the appearance of the third part of M. Temminck's Manual, which contained the *Borealis*—I may then add, under this supposed combination, that the geographical range of the species is very considerable. It inhabits Scandinavia in summer; and M. Temminck says he has received specimens from Greenland, which did not differ from those which are obtained in Europe. Like most birds which visit the Arctic Regions, this species is found in the northern parts of America and Asia as well as Europe; and M. Temminck mentions having received specimens from Japan.

---

* Mr. Pelerin has prepared a cranium of the Polish Swan, and pointed out to me the well-marked osteological differences which exist between it and the head of the common Tame Swan; thus further proving the distinction of the Polish Swan, which I had named *Cygnus immutabilis*, from the circumstance of its producing *white cygnets.*

The beak is much larger than that of the Common Redpole, but of the same form, and yellowish brown, the under mandible being the lightest in colour; the irides dusky brown; in winter the feathers of the forehead dark red; back of the head, neck, upper part of the back, and the smaller wing-coverts, a mixture of dark and light brown, the middle of each feather being the darkest part; the smaller wing-coverts tipped with dull white, forming a short bar; the greater wing-coverts uniform dark brown, with broader ends of dull white, forming a conspicuous bar; quill-feathers greyish brown; the primaries with narrow, and the tertials with broader outer edges, of dull white; lower part of the back, the rump, and upper tail-coverts, mealy, or greyish white, with a few dark brown streaks; tail-feathers greyish brown, with light brown edges, the two in the middle short: the form of the tail deeply forked; the chin almost black; the cheeks, ear-coverts, neck, breast, belly, and under tail-coverts, pale brownish white, streaked with darker brown, except on the middle of the breast and belly, which are plain: the dark streaks are largest on the flanks; the legs, toes, and claws, dark brown.

The whole length five inches and a quarter. From the carpal joint to the end of the wing, two inches and seven-eighths: the first, second, and third quill-feathers nearly equal in length; but the first and second rather longer than the third; the fourth feather two-twelfths of an inch shorter than the third.

M. Temminck's description of his *Fringilla Borealis* at different seasons of the year, is as follows:—

The old male in spring has the throat and lore black; forehead and upper part of the head blood red; front of the neck, breast, and rump, rose red; belly and flanks pure white: occiput and nape covered with darkish streaks on a reddish white ground; shoulders and back with dark streaks, edged with white; pure white edges to all the quill-feathers of the wings and those of the tail.

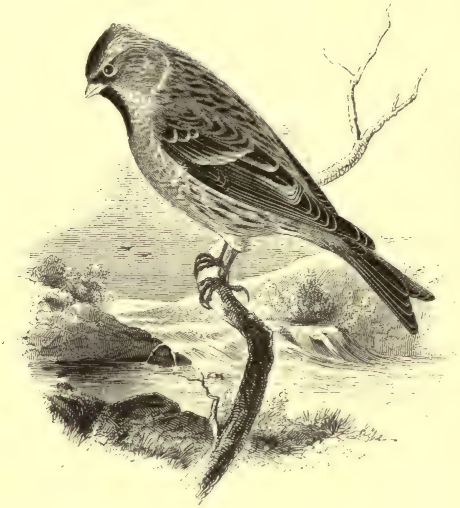
The males in autumn have the rump white, with a slight tint of rose colour and some brown streaks; a slight reddish tint on the cheeks; the brown streaks on the back edged with red; the top of the head varied with two shades of red.

The female has the forehead whitish; the top of the head red; the breast, the under parts of the body and the rump white, marked with brown streaks, which are most numerous on the flanks.

Although the summer plumage is here described by M. Temminck, this bird is rare on the Continent, and is not known to breed in the South of Europe, or even in Scotland, while the Lesser Redpole breeds every year in numbers in Scotland, and even in some of the more northern counties in England.

The heads of both birds in different points of view, with comparative linear measurement, are figured at page 568.

INSESSORES. *FRINGILLIDÆ.*
CONIROSTRES.



THE LESSER REDPOLE,

OR COMMON REDPOLE.

Linota linaria.

Fringilla linaria,	*Lesser Red-headed Finch,*	Penn. Brit Zool. vol. i. p. 466.
,, ,,	,, *Redpole,*	Montagu, Ornith. Dict.
,, ,,	,, ,,	Bewick, Brit. Birds, vol. i. p. 203.
,, ,,	*Rose Linnet,*	Flem. Brit. An. p. 85.
Linaria minor,	*Lesser Redpole Linnet,*	Selby, Brit. Ornith. vol. i. p. 320.
Fringilla linaria,	,, ,,	Jenyns, Brit. Vert. p. 138.
Linaria minor,	,, ,,	Gould, Birds of Europe, pt. xi.
Fringilla linaria,	*Grosbec sizerin,*	Temm. Man. d'Ornith. vol. i. p. 373.

The Lesser, or more common Redpole, is the smallest of the British Linnets, and is even a trifle smaller than our diminutive Siskin. It is more especially a winter visitor to the southern counties of England, appearing in small flocks from Michaelmas till April; but is not often seen in the south of England in summer. It is at once distinguished from the Mealy Redpole, last described, by its smaller size; and though not attractive from its notes, which are little more than a lively twitter, its sprightly habits and engaging confidence render it a general favourite, since it is, of all the small birds, one of those that are the most easily tamed. This species will breed in confinement; and W. Rayner, Esq. of Uxbridge, lately sent me word that a Lesser Redpole in his aviary made her nest, and laid five eggs during the last summer, 1838.

In some of the northern counties of England, and in Scotland particularly, this little bird is resident all the year; and of its habits, Mr. Selby says, that "during the summer it retires to the underwood that covers the bases of our mountains and hills, and that often fringes the banks of our precipitous streams, in which sequestered situation it breeds. The nest is built in a bush or low tree, (such as the willow, alder, or hazel,) of moss, and the stalks of dry grass, intermixed with down from the catkin of the willow, which also forms the lining, and renders it a particularly soft and warm receptacle for the eggs and young. From this substance being a constant material of the nest, it follows that the young are produced late in the season, and are seldom able to fly before the end of June, or the beginning of July. The eggs are four or five in number; their colour pale bluish green, spotted with orange brown, principally towards the larger end." I have received the nest from Durham; and Mr. J. D. Salmon, formerly of Thetford, very kindly sent me two nests of the Lesser Redpole, which were taken in 1835 and 1836 in the vicinity of Halifax in Yorkshire. The eggs are seven lines and a half in length, by five lines and a half in breadth. Pennant says, "We found the nest of this species on an alder stump near a brook, between two and three feet from the ground; the bird was sitting on four eggs, and was so tenacious of her nest, as to suffer us to take her off with our hand; and we found that after we had released her she would not forsake it." Mr. Selby adds, that "in winter, the Lesser Redpole descends to the lower grounds in considerable flocks, frequenting woods and plantations, more especially such as abound in birch or alder trees, the catkins of which yield it a plentiful supply of food. When feeding, its motions afford both interest and amusement; since in order to reach the catkins, which generally grow near the extremities of the smaller branches, it is obliged, like the Titmouse, to hang with its back downwards, and assume a variety of constrained attitudes; and, when thus engaged, it is so intent upon its work, as frequently to allow itself to be taken by a long stick smeared with bird-lime, in which way I have occasionally captured it when in want of specimens for examination. It also eats the buds of trees, and (when in flocks) proves in this way seriously injurious to young plantations. Its call-note is very frequently repeated when on wing, and the notes it produces during the pairing season, although few, and not delivered in continuous song, are sweet and pleasing."

According to Mr. Thompson, the Lesser Redpole is common in Ireland. Sir William Jardine, writing from home in Dumfriesshire, says, a few pairs breed here annually in the vicinity, in young moorland plantations; and it is not unfrequent during summer in the Middle Highlands. Small parties also occur in the winter. Mr. Macgillivray in confirmation, adds, "that in many parts of Scotland this Redpole remains all the year, breeding in the hilly districts among the brushwood that skirts the flanks of the mountains, or covers the margins of streams in rocky dells. I have seen them in August, the same author says, scattered over a tract overgrown with thistles, the seeds of which they picked out precisely in the same manner as the Goldfinch. On such occasions, unless they have previously been shot at or pursued, they take little heed of approaching danger, so that one may easily approach them." This habit of unsuspecting confidence has been noticed by other naturalists. The Rev. W. T. Bree remarks,* "I well remember, when a very young sportsman, or rather a young carrier of a gun, falling in with a flock of Redpoles feeding on the seeds of the alder; after firing at them, I found that they returned to the very same tree (though I was standing under it) before I could reload my gun. This they did many times, and with a perseverance which I shall not easily forget." Mr. Audubon, in the fourth volume of his Ornithological Biography, very recently published, says of the Lesser Redpole, "they were in small parties of seven or eight, apparently formed by the members of the same family; and although several of these groups were around me, they did not intermingle until fired at, when they all simultaneously rose on wing, mixed together, and after performing several short evolutions, returned to the same bushes, separated into families, and resumed their occupations. When alighted they were quite unsuspecting, and so heedless as to allow a close approach, scarcely regarding my presence, but clinging to the branches, dexterously picking out the seeds of the alder cones, and occasionally coming to the ground after some which had dropped. Few birds exhibit a more affectionate disposition than the Little Redpoll, and it was pleasing to see several on a twig feeding each other by passing a seed from bill to bill, one individual sometimes receiving from his two neighbours at the same time."

---

* The Naturalist, vol. iii. p. 452.

Mr. Selby, who visited Sutherlandshire in June 1834, says, "The Lesser Redpole Linnet was met with whereever birch copse occurred. Several were shot, but all appeared of the common species, and none could be assigned to the larger variety, or *L. borealis*." This appears to me to be additional evidence that the larger, or Mealy Redpole, is a species distinct from the smaller. I do not find a single record of the Mealy Redpole breeding in this country; but the nest and eggs of the Lesser Redpole may be obtained without difficulty every season. The Rev. Mr. Low includes it among the birds of the Orkneys, observing, that it builds in Hoy, among the small shrubs and heath, frequenting the farmyards in winter.

Muller and Professor Nilsson say that this bird inhabits Denmark and Scandinavia generally. Mr. Hewitson saw it in Norway; and Captain W. Scoresby, in his account of the Arctic Regions, says, "on our approach to Spitzbergen, several Lesser Redpoles alighted on different parts of the ship, and were so wearied apparently with being on the wing, though our distance from the land was not above ten miles, that they allowed themselves to be taken alive. How this little creature subsists, and why a bird of such apparent delicacy should resort to such a barren and gelid country, are questions of some curiosity and difficulty. It must be migratory; and yet how such a small animal, incapable of taking the water, can perform the journey from Spitzbergen to a milder climate, without perishing by the way, is difficult to conceive. Supposing it to take advantage of a favourable gale of wind, it must still be at least ten hours on the wing before it could reach the nearest part of Norway, an exertion of which one would imagine it to be totally incapable."

So hardy is this species, that, according to Dr. Richardson, it is a permanent resident in the Fur Countries of North America, where it may be seen in the coldest weather on the banks of lakes and rivers, hopping among the reeds and carices, or clinging to their stalks. Although numerous throughout the year, even in the most northern districts, a partial southern migration takes place. Mr. Audubon says, "They are abundant every cold winter in the northern parts of Massachusets and Maine, as well as in all the British provinces. Large flocks visit Pennsylvania for a month or two in severe winters." The Lesser Redpole in Europe goes as far south as Rome and Sicily in winter. Eastward from Norway, this bird is found in Siberia; and, according to M. Temminck, in Japan.

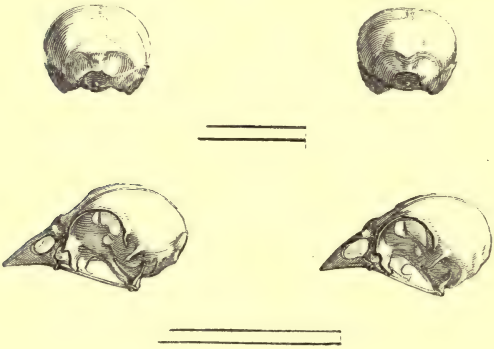
The beak is brown, the under mandible pale brown; the irides dusky brown; forehead deep red; the head, neck, back, wing-coverts, rump, and upper tail-coverts, a mixture of dark and light brown, the centre of each feather being darkest; the outer feather only of the small wing-coverts tipped with wood-brown; all the feathers of the greater coverts tipped with pale brown, forming one conspicuous bar; quill-feathers brownish black, the primaries with a very narrow edge, and the tertials with broader edges of pale wood-brown; tail-feathers not so deeply forked, or near so long as those of the Mealy Redpole, but similar in colour; chin with a patch of black; cheeks, sides of the neck, sides of the breast and flanks, with dark brown streaks on pale brown; the breast strongly marked with vermilion red; belly and under tail-coverts dull brownish white; legs, toes, and claws, brown.

The whole length four inches and one quarter. From the carpal joint to the end of the wing, two inches and five-eighths; the first three quill-feathers nearly equal in length ; but the second the longest ; the fourth one-twelfth shorter than the third. M. Temminck, in the third or supplementary portion of his Manual, has corrected his former measurement of this bird, as given in the second edition of the Manual, and now states the whole length to be four inches, five or six lines. But I may here remark, what has been also observed by Mr. Macgillivray, that the measurements and some other peculiarities of the Redpole of American authors, approach nearer to those of our Mealy Redpole than to those of the Lesser Redpole.

The females of the Lesser Redpole are without the red on the breast, and the dark coloured parts about the head are rather brown than black.

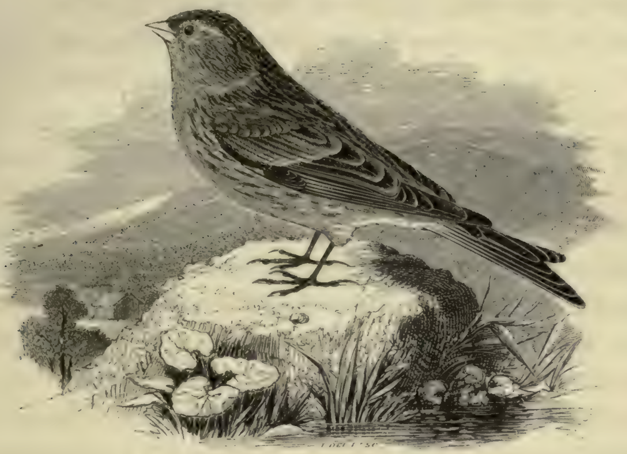
Young birds of the year have no red colour on the forehead or breast ; but young males acquire a portion of this colour in the following spring, though less brilliant than that of older males.

The vignette exhibits representations of the head of the Mealy and Lesser Redpole, with comparative linear measurements.



INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE MOUNTAIN LINNET,

OR TWITE.

Linota montium.

Fringilla montana,	*Twite Finch,*	PENN. Brit. Zool. vol. i. p. 467.
" *montium,*	" "	MONTAGU, Ornith. Dict.
" "	*Mountain Linnet,*	BEWICK, Brit. Birds, vol. i. p. 207.
" "	" "	FLEM. Brit. An. p. 84.
Linaria montana,	" "	SELBY, Brit. Ornith. vol. i. p. 318.
Fringilla montium,	" "	JENYNS, Brit. Vert. p. 140.
Linaria montana,	" "	GOULD, Birds of Europe, pt. xv.
Fringilla montium,	*Gros-bec de montagne,*	TEMM. Man. d'Ornith. vol. i. p. 368.

THE MOUNTAIN LINNET is distinguished from the Common Linnet, and from both the Redpole Linnets, by the greater length of its tail, which gives this bird a more elongated and slender appearance; and it is further distinguished by having a reddish tawny throat, but does not exhibit any red colour either on the head or breast at any season of the year. There is, however, a tinge of red on the rump of the male in summer, and in the general character of the plumage of both sexes there is considerable similarity to that of the other species of the genus. This bird is a winter visitor only to the southern parts of England, where it is generally seen in small flocks, with other Linnets; but it breeds in the northern parts of England, in Scotland, and in the western as well as the northern Scottish Islands every season.

The Mountain Linnet, as its name would imply, prefers high hills and mountains, or, at least, an interchange of moor and fell. Dr. Latham sent Colonel Montagu a nest and eggs taken in Yorkshire; and according to Mr. Neville Wood, this bird breeds also in some parts of Staffordshire and in Derbyshire, exhibiting its partiality to the higher grounds. This is probably about the southern limit of its breeding ground in this country.

Mr. Thompson says it is not uncommon in certain localities in Ireland. Mr. Macgillivray states that it "is plentiful in the Hebrides, and in winter frequents the corn-yards in large flocks, clinging to the stacks of oats, and picking out the seeds. Its flight is rapid and undulated, and it wheels over the fields previous to alighting, uttering a soft twitter at intervals. When disturbed it betakes itself to tall trees, or to a distant field; but is not shy, and may therefore be easily approached when feeding. In spring it forsakes its winter haunts, and disperses over the hilly tracks, where it forms its nest on the ground, among short heath, or on the grassy slopes of craggy spots. It is neatly constructed, being composed externally of fine dry grass, fragments of heath, and a little moss, internally of fibrous roots, wool, and hair. The eggs are bluish white, marked towards the larger end with light brown and purplish red, sometimes with a few blackish dots."

Sir William Jardine sends me word that the Mountain Linnet is abundant in the north Highlands, taking the place there in summer of the Common Linnet, *L. cannabina*, in the Lowlands. Once or twice, this gentleman observes, I have seen a flock here during the winter, frequenting wild stubble land. Last winter I shot a pair within a few hundred yards of Jardine Hall, evidently driven in by the storm. They were feeding on the heads of the black knap-weed, *Centaurea nigra*.

Mr. Selby "found it a plentiful species, and generally distributed in Sutherlandshire. It was first met with at Laing, and afterwards occurred at all the different stations that were occupied. Its song was pleasing, though scarcely equal in compass to that of *L. cannabina*."

The Rev. Mr. Low states in his *Fauna Orcadensis*, "that this little bird remains in the Orkneys all the year, building in the heath, but seldom or ever in bushes." Mr. J. D. Salmon, who furnished to Mr. Loudon's Magazine of Natural History an account of a visit to the Orkneys, has remarked, "That the Mountain Linnet was the only species of Linnet seen by the party; two nests came under our observation, one was placed upon the ground, among the young corn, the other amidst some whins, *Ulex*. They were both alike: their outsides were composed of small roots and dried grass; and their insides lined with a small quantity of hair and a few feathers; and each contained six eggs, similar in appearance to those of the Common Linnet, but rather smaller."

Mr. Dunn, in his Ornithologist's Guide to Orkney and Shetland, says of the Mountain Linnet, or, as it is there called, the Heather Lintee, this, "as far as I am aware, is the only Linnet that breeds in these countries, over which it is pretty numerously dispersed. I have repeatedly taken its nest, which I found in shaded situations amongst long heath. In the winter it appears in large flocks, frequently in company with Sparrows and Snow Buntings, and infests the corn-yards." Our southern bird-catchers say they can tell immediately if there are any Mountain Linnets among the flocks of small birds around them, by their particular note, which is considered to resemble the word "twite," in its sound, and hence the name of Twite, by which, as well as by that of Mountain Linnet, this bird is very generally known. Its food consists of any sort of seed of small size.

Our Mountain Linnet inhabits Denmark, Norway, Sweden, and indeed Scandinavia generally, but is said to be rare in Russia, particularly in the eastern portions. It is observed periodically on its passage in Germany and France, and some are said to remain and breed in the mountains of Switzerland. It is found in Provence, at Genoa, and even as far south as Rome in winter, but retires to the northern mountains to breed in summer. M. Temminck says our bird is found in Japan, where it is known by the name of Zuzume.

The beak is yellow, and hence the term *flavirostris* has by some authors been attached to this species; the irides hazel; the forehead, crown of the head, ear-coverts, neck behind, back, and wings, are of two shades of brown, the darker colour pervading the middle of the feather, the lighter wood-brown colour on the edges; the greater wing-coverts only tipped with pale wood-brown, forming one bar across the wing; quill-feathers brownish black, the primaries with narrow edges, the tertials with broader margins of pale brown; the rump red; upper tail-coverts like the back in colour; tail-feathers brownish black, with narrow white external edges, and broader light brown inner margins; tail deeply forked; chin and throat uniform reddish yellow brown, without streaks but streaked on the sides of the lower part of the breast and flanks with dark brown;

lower part of the breast, belly, and under tail-coverts, dull brownish white; legs, toes, and claws, very dark brown.

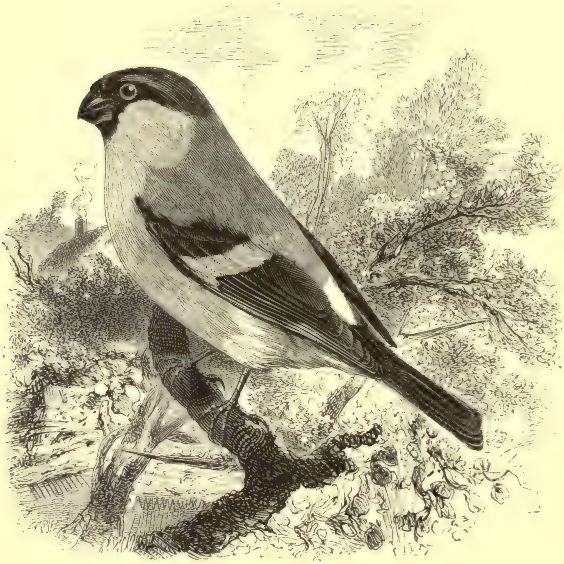
The red colour on the rump is a sexual as well as a seasonal assumption, peculiar to the male only in summer. The whole length of the bird is five inches and one quarter; but the body being slender, and the tail-feathers lengthy, this bird has a more elongated appearance than the Common Linnet, or the Mealy Redpole. From the carpal joint to the end of the wing, three inches; the first and third quill-feathers equal in length; the second longer than either, and the longest in the wing; the fourth feather one-eighth of an inch shorter than the third.

The female is without the red colour on the rump, and is also lighter in colour on the back; her beak, less decidedly yellow at the base, is dusky brown at the tip.

Young birds, like the females, are lighter in colour generally, and are thus distinguished from old males.

INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE BULLFINCH.

Pyrrhula vulgaris.

Loxia	*pyrrhula,*	*The*	*Bullfinch,*	Penn. Brit. Zool. vol. i. p. 430.
"	"		"	Montagu, Ornith. Dict.
"	"		"	Bewick, Brit. Birds, vol. i. p. 168.
Pyrrhula	*vulgaris,*	*Common*	"	Flem. Brit. An. p. 82.
"	"	"	"	Selby, Brit. Ornith. vol. i. p. 336.
"	"	"	"	Jenyns, Brit. Vert. p. 140.
"	"	*The*	"	Gould, Birds of Europe, pt. xi.
"	"	*Bovreuil commun,*		Temm. Man. d'Ornith. vol. iv. p. 338.

Pyrrhula.—*Generic Characters.*—Beak short and thick at the base; the sides inflated and bulging; upper mandible convex, deflected at the tip, and overhanging the point of the lower one. Nostrils basal, lateral, round, more or less concealed by hair-like feathers at the base of the bill, directed forwards. Feet with the tarsus shorter than the middle toe: toes, three before, one behind, divided. Wings rather short; the first quill shorter than the third, which is of the same length as the fourth, and the longest in the wing.

The Bullfinch is too common a bird not to be exceedingly well known, and is found in most parts of England, but particularly those which are wooded and cultivated, preferring gardens, orchards, hedgerows, plantations, and small woods, to bleak and exposed tracks of common, waste, or moor. It is rather shy and retiring in its habits, and is seldom seen associated with any but its own species. In confinement this bird appears to have an extraordinary appetite; and at large is found to be particularly destructive in gardens throughout the spring of the year, devouring the flower buds of the various sorts of gooseberries, cherries, and plums, in succession, to such an extent, as to destroy, if unmolested, all prospect of any crop of fruit for that season. The author of the Journal of a Naturalist, says, "In all instances I think it will be observed, that such buds as produce leaves only are rejected, and those which contain the embryo of the future blossom selected: by this procedure, though the tree is prevented from producing fruit, yet the foliage is expanded as usual; but had the leaves—the lungs of the plant—been indiscriminately consumed, the tree would probably have died, or its summer growth been materially injured; we may thus lose our fruit this year, yet the tree survives, and hope lives too, that we may be more fortunate the next." Mr. Selby, in the first volume of the Naturalist, remarks, "With me the Bullfinches are very destructive, particularly to the plum trees, apples, medlars, &c. It is the blossom buds that are chiefly preferred. I have dissected dozens of these birds, and have never found any remains of insects in the crop or stomach. They are here very numerous, being fostered by the extensive plantations I have made; and I am obliged, reluctantly I must say, to make war on them every spring." From various authorities it appears that the Bullfinch is a more decided bud-destroyer than any other British Bird. In winter it feeds on hips, the fruit of the dog-rose, berries, and seeds. Towards the end of April this bird leaves the gardens for more secluded situations, and begins with its mate to seek a place of security for its nest. Being rather a late breeder, it seldom begins to build till the beginning of May, and produces but one brood in the season. The nest is formed of small twigs, and lined with fibrous roots, the materials not very compactly entwined together, and usually placed, four or five feet above the ground, on a branch of a fir tree, or in a thick bush. The eggs are four or five in number of a pale blue, speckled and streaked with purplish grey and dark purple. These are hatched towards the end of May, after fifteen days' incubation. The shy and retiring habits of the Bullfinch have been already referred to, and it is known that a slight provocation will in general cause it to desert its nest; but W. H. R. Read, Esq. of Frickley Hall in Yorkshire, has recorded in the Naturalist that in the early part of June 1838, a Bullfinch allowed herself to be caressed while sitting on her young ones, and would feed from the hand without the least fear. The nest was in a laurel-bush, close to the house. Mr. Neville Wood has recorded the finding of an egg of the Bullfinch on the ground in Yorkshire so late as the 15th of November.

The young birds of the year continue to associate with the parents through the autumn and winter till the pairing time of the following spring; and so constant is the attachment of adult birds throughout the year, that they are believed, like some other species among birds, to pair for life. The Bullfinch will breed in confinement, particularly in aviaries where there is sufficient space. Hybrids, or mules, as they are more commonly called, have been produced between the Bullfinch and the Canary; but such a union is of rare occurrence, and requires particular management.

The notes of the Bullfinch, as heard in a wild state, particularly the louder ones, have no remarkable quality of tone to recommend them; its call-note is, however, soft and plaintive: it is principally for its power of imitation and its memory that this bird is prized.

"In Germany," says Bechstein, "those young Bullfinches that are to be taught to sing particular tunes, must be taken from the nest when the feathers of the tail begin to grow; and must be fed only on rapeseed soaked in water, and mixed with white bread. Although they do not warble before they can feed themselves, it is not necessary to wait for this to begin their instruction; for it will succeed better, if we may say so, when infused with their food; since experience proves that they learn those airs more quickly, and remember them better, which they have been taught just after eating. It has been observed that these birds, like the Parrots, are never more attentive than during digestion. Nine months of regular and continued instruction are necessary before the bird acquires what amateurs call firmness; for if the instruction cease before this is obtained, they would destroy the air, by suppressing or displacing the different parts, and they often forget it entirely at their first moulting. In general it is a good plan to separate them from the other birds, even after they are perfect; because, owing to their great quickness in learning, they would spoil the air entirely by introducing wrong passages; they must be helped to continue the song when they stop, and the lesson must always be repeated while they are moulting, otherwise they will become mere chatterers, which would be doubly vexatious after having bestowed trouble in teaching them. Different degrees of capacity are shown here, as well as in other animals: one young Bullfinch learns with ease and quickness; another with difficulty, and slowly; the former will repeat, without hesitation, several parts of a song; the latter will hardly be able to whistle one part, after nine months' uninterrupted teaching: but it has been remarked that those birds which learn with most difficulty, remember the songs which they have once been well learned, better and longer, and rarely forget them, even when moulting. The instrument used is a bird-organ, or a flageolet, but generally the former. Many birds, when young, will learn some strains of airs whistled or played to them regularly every day; but it is only those whose memory is capable of retaining them that will abandon their natural song, and adopt fluently, and repeat without hesitation, the air that has been taught them. Thus a young Goldfinch learns, it is true, some part of the melody played to a Bullfinch; but it will never be able to render it as perfectly as this bird: this difference is not caused by the greater or less flexibility of the organ, but rather by the superiority of memory in the one species over that of the other. Numbers of Bullfinches, which have been taught in the manner described, are brought from Germany to London every spring, and are frequently advertised for sale in the London newspapers: the price, which is sometimes considerable, depends on the powers and proficiency of the performer."

The Bullfinch, as before observed, is common in England, and Mr. William Thompson writes me word that it is not uncommon in certain localities in Ireland. According to Sir William Jardine and Mr. Macgillivray, it is also frequent in the southern parts of Scotland: but it is not found in the northern Scottish islands of Orkney or Shetland. It inhabits Denmark, Norway, Sweden, and Russia; is particularly common in the forests of Germany, and from thence to the shores of the Mediterranean, and is seen at Corfu, in Sicily, and in Malta. To the eastward in this parallel it is found as far as the countries spread between the Black and the Caspian Seas. M. Thunberg long ago said that the European Bullfinch was an inhabitant of Japan; and M. Temminck includes it in his recent Catalogue of the Birds of Europe found in that country.

In the adult male the beak is of a shining black; the irides dark brown; the whole of the top of the head jet black; nape of the neck, back, and lesser wing-coverts, delicate bluish grey; the greater wing-coverts black, the ends white, forming a conspicuous bar across the wing; the rump above white; upper tail-coverts black; all the quill and tail-feathers also black, tinged with blue, but the primary wing-feathers not so dark as the tertials. The chin black; ear-coverts, sides of the neck, throat, breast, and belly, tile-red; vent and under tail-coverts white; under surface of the wings slate grey; under surface of the tail-feathers greyish black; legs, toes, and claws, purple brown.

The whole length of the bird rather more than six inches. From the carpal joint to the end of the wing three inches and one-eighth: the second, third, and fourth primaries, nearly equal in length, and the longest in the wing; the first and fifth feathers are also equal in length, but each about one-eighth shorter than the second, third, or fourth.

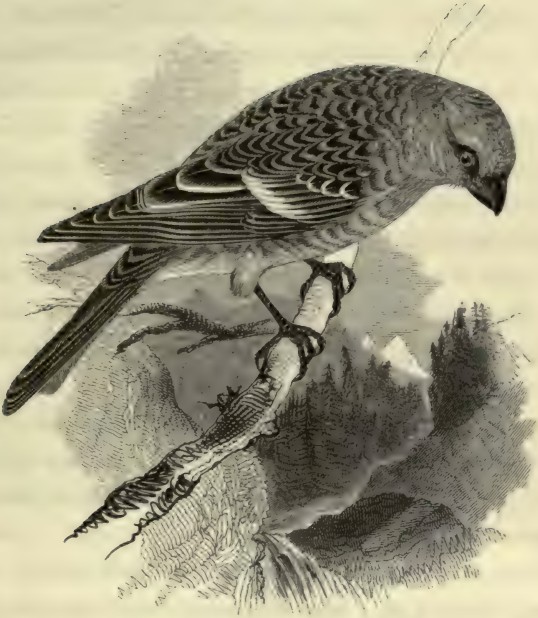
The female has the grey colour of the back more mixed with brown; the under surface of the body, where the male is red, is in her of a brownish purple red; the head, wings, and tail, not quite so pure a black.

Young birds in their first feathers resemble the female, but are without the black head. Some time after leaving the nest, young males assume a brighter red colour on the breast and the black on the crown of the head. The bright tints of the adult male are not obtained till after the second moult.

Bullfinches appear to be liable to great changes of colour in their plumage. White of Selborne says, in one of his letters, " A few years ago I saw in a cage a cock Bullfinch which had been caught in the fields after it had come to its full colours. In about a year it began to look dingy; and, blackening every succeeding year, it became coal black at the end of four. Its chief food was hempseed: such influence has food on the colour of animals." Morton, in his History of Northamptonshire, as quoted by Pennant, gives another instance of such a change, with this addition, that the year following, after moulting, the bird recovered its natural colours. The occurrence of varieties, partially or wholly white, have been recorded in the Magazine of Natural History, and in the Naturalist. Professor Nilsson of Lund, in the coloured illustrations of his Fauna of Scandinavia, has figured a beautifully marked variety of the Bullfinch, which is pure white on the back, wings, and tail; but the head, and all the under surface of the body are of a delicate rose colour. This bird is quoted as the *Loxia flamengo* of Sparrman.

INSESSORES.
CONIROSTRES.

FRINGILLIDÆ.



THE PINE GROSBEAK.

Pyrrhula enucleator.

Loxia	*enucleator,*	*Pine Grosbeak,*	PENN. Brit. Zool. vol. i. p. 423.
„	„	„ „	MONTAGU, Ornith. Dict.
„	„	„ „	BEWICK, Brit. Birds, vol. i. p. 166.
Corythus,	„	*Common Hawfinch,*	FLEM. Brit. An. p. 76.
Pyrrhula	„	*Pine Bullfinch,*	SELBY, Brit. Ornith. vol. i. p. 334.
„	„	„ „	JENYNS, Brit. Vert. p 141.
Corythus	„	„ *Grosbeak,*	GOULD, Birds of Europe, pt. iii.
Pyrrhula	„	*Bouvreuil dur-bec,*	TEMM. Man. d'Ornith. vol. i. p. 333.

THE PINE GROSBEAK appears to be a very rare bird in this country, and but few instances of its having been obtained are either known or recorded. Pennant says that he saw them flying above the great forests of Invercauld, in Aberdeenshire; and he imagined that they had bred there, because he saw them as early as the 5th of August. Mr. Selby observes, "Such a conclusion, however, ought scarcely to be inferred from this fact, as a sufficient interval of time had elapsed for these individuals to have emigrated from Norway, or other northern counties to Scotland, after incubation, as they are known to breed as early as May in their native haunts. I have made many inquiries respecting these birds, during excursions in Scotland, but cannot learn that the nest has ever been found; and indeed, from the intelligence obtained from gamekeepers, and those most likely to have made observations connected with ornithology, it appears that they are very rarely seen, and can only be regarded as occasional visitants." Only one specimen is recorded as having been killed in Ireland, and this was shot in December 1819 at the Cave-hill, near Belfast.

Messrs. C. J. and James Paget, in their sketch of the Natural History of Yarmouth, mention at page 6, that a flight of these birds was seen on the Denes in November 1822, and the Rev. Richard Lubbock, in his Fauna of Norfolk, refers to a pair that were shot, and which were said to have had a nest, which unfortunately was destroyed. Mr. Rylands, in his Catalogue of Birds found in Lancashire, published in the second volume of the Naturalist, includes the Pine Grosbeak as obtained in Hulston fir trees, on the authority of T. K. Glazebrook, Esq.; and a female in my own collection was shot some years ago at Harrow on the Hill.

The Pine Grosbeak, or Pine Bullfinch as it is frequently called, closely resembles the Common Bullfinch in the form of its beak, and in other generic characters; while it agrees with the Crossbills in many of its habits, as well as in the general colouring and changes of its plumage.

The food of this species is seeds and berries; it frequents pine forests, builds a nest of small sticks, with a lining of feathers, and usually places it on a branch of a tree, a few feet only above the ground. It lays four or five white eggs, about one inch long, by ten lines in breadth: and the young birds are said to be hatched in June. The male has an agreeable song, will sometimes sing at night, and in confinement is said to remain in song nearly the whole of the year.

The Pine Grosbeak is more abundant in the northern parts of Europe and America than elsewhere, and is found in Sweden, Norway, Lapland, Russia, Siberia, and sparingly in the north of Germany, but more frequently now than formerly. According to M. Vieillot, it is a very rare bird in France, sometimes seen, and then only in winter, in those parts bordering on Germany or Switzerland, where there are abundance of Pine Forests; but this bird has been seen as far south as Provence and Genoa.

North America appears to be the country in which the habits of the Pine Grosbeak have been more attentively observed, and to the recent describers of the birds of that extended region I must refer for particulars. Mr. Audubon has observed them in Newfoundland, on the coast of Labrador, and at Hudson's Bay. In the winter of 1836 these birds were seen as far south as the vicinity of Philadelphia; and that season also they were abundant in the States of New York and Massachusets. Dr. Richardson saw them as far north as the 60th parallel. Mr. Audubon, in his extended and valuable Ornithological Biography, says, "The flight of the Pine Grosbeak is undulating and smooth, performed in a direct line when it is migrating, at a considerable height above the forests, and in groups of from five to ten individuals. They alight frequently during the day, on such trees as are opening their buds or blossoms. At such times they are extremely gentle, and easily approached. They are exceedingly fond of bathing, and whether on the ground or on branches, move by short leaps. I have been much surprised to see, on my having fired, those that were untouched fly directly towards me until within a few feet, and then slide off, and alight on the lower branches of the nearest tree, where, standing as erect as little Hawks, they gazed upon me as if I were an object quite new, and of whose nature they were ignorant. They are easily caught under snow-shoes put up with a figure of four, around the wood-cutters' camps, in the State of Maine, and are said to afford good eating. Their food consists of the buds and seeds of almost all sorts of trees; occasionally, also, they seize a passing insect. I once knew one of these sweet songsters, which in the evening, as soon as the lamp was lighted in the room where its cage was hung, would instantly tune its voice anew."

A friend of Mr. Audubon says, "I received a male in splendid plumage, but so emaciated that he seemed little else than a mass of feathers. By cautious feeding, however, he soon regained his flesh, and became so tame as to eat from my hand without the least appearance of fear. To reconcile him gradually to confinement, he was permitted to fly about my bedroom; and upon rising in the morning, the first thing I did was to give him a small quantity of seed. But three mornings in succession I happened to lie rather later than usual, and each morning I was aroused by the bird fluttering upon my shoulder, and calling for his usual allowance. The third morning I allowed him to flutter about me some time before showing any symptom of being awake; he no sooner observed that his object was effected than he retired to the window, and waited patiently until I arose. As the spring approached, he used to whistle occasionally in the morning, and his notes were exceedingly rich and full. About the time, however, when the species began to remove to the North, his former familiarity entirely disappeared." Mr. Audubon further says, "While in the State of Maine, I observed that these birds when travelling fly in silence, and at a considerable height above the trees. They alight on the topmost branches, so that it is difficult to obtain them, unless one has a remarkably good gun. But, on waiting a few minutes, you see the flock, usually composed of seven or eight individuals, descend from branch to branch, and betake themselves to the ground, where they pick up gravel, hop towards the nearest pool or streamlet, and bathe by dipping their heads, and scattering the water over them, until they are quite wet; after which they fly to the branches of low bushes, shake themselves with so much vigour as to produce a smart rustling sound, and arrange their plumage. They then search for food among the boughs of the taller trees."

In the male bird from which the figure was drawn, the beak is dark brown, the lower mandible tinged with dark red; the base of the upper mandible and the eyes surrounded with a narrow band of dusky black: the irides hazel; the whole of the head, cheeks, ear-coverts, and the neck behind, vermilion red; the feathers of the back and scapulars greyish black, margined with red; those of the rump and the upper tail-coverts with broader margins of red, producing as they overlay each other a continuous surface of red colour like that on the head and neck; the wing-coverts and quill-feathers greyish black; both sets of wing-coverts with broad outer edges, and the tips white, but tinged with red; all the quill-feathers with narrow outer edging of white, tinged with red on the proximal half of the first six of the primaries; tail-feathers uniform greyish black; the tail in form slightly forked. The chin, throat, breast, and sides, vermilion red; but the feathers, if raised, are found to be like those on the upper surface of the bird, grey at the base; the belly, vent, and under tail-coverts, French grey, the latter edged with white; under surface of wings and tail slate grey; legs and toes blackish brown; the claws black.

The whole length of the bird eight inches. From the carpal joint to the end of the wing four inches and a half: the third quill-feather of the wing the longest; the second very little shorter than the third; the first feather a little shorter than the fourth, and both shorter than the second; the fifth one-quarter of an inch shorter than the fourth.

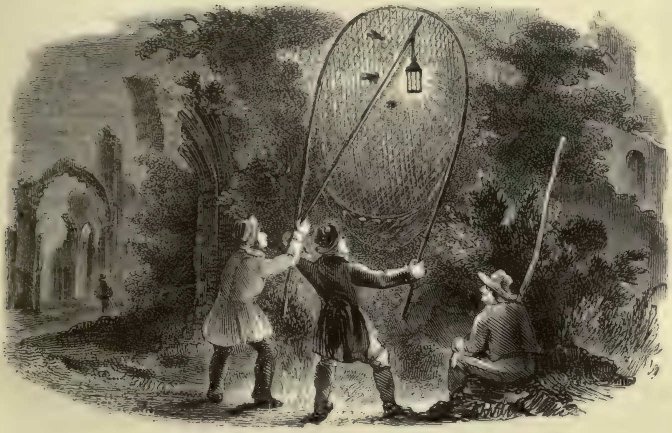
This bird is considered to be a young male after his first autumnal moult, and this plumage is retained till the second year, when, according to authors, all the red parts become more or less tinged with yellowish orange.

The adult female killed at Harrow has the beak orange brown; the irides hazel; the head, ear-coverts, and back of the neck, honey-yellow; back and scapulars slate grey; rump and upper tail-coverts honey-yellow, like the colour of the head; both sets of wing-coverts, and all the quill-feathers, greyish black, edged and tipped with white, without any of the red tinge observed on the white of young males; tail above uniform greyish black; all the under surface of this bird, from the chin to the under tail-coverts, uniform ash-grey; legs, toes, and claws, dark brown.

Females, when older than this bird, have the head, rump, and upper tail-coverts, orange yellow. When younger than our bird, the same parts are greenish brown.

Young birds of the year, before their first moult, resemble the female, but are more tinged with brown.

The vignette below represents bat-fowling, a mode of catching birds at night.



END OF THE FIRST VOLUME.

A FAMILIAR INTRODUCTION TO THE STUDY OF POLAR LIGHT; with a Description of, and Instructions for Using the Tab Hydro-Oxygen Polariscope and Microscope. By **CHARLES WOOD** F.R.S. 8vo., Illustrated, 3*s*.

ANATOMICAL MANIPULATION; or, The Methods of pursuing Pr Investigations in Comparative Anatomy and Physiology. Also an Int tion to the Use of the Microscope, &c. By **ALFRED TULK**, M.R.C.S., M and **ARTHUR HENFREY**, F.L.S., M.Mic.S. With Illustrated Dia Foolscap 8vo., 9*s*.

THE NATURAL HISTORY OF GREAT BRITAIN. This Se Works is Illustrated by many Hundred Engravings; every Species ha Drawn and Engraved under the immediate inspection of the Authors; t Artists have been employed, and no care or expense has been spared. A few on larger paper, royal 8*vo*.

THE QUADRUPEDS, by **PROFESSOR BELL**. 1*l*. 8*s*.

THE BIRDS, By **MR. YARRELL**. Second Ed., 3 vols. 4*l*. 14*s*. 6*d*.

COLOURED ILLUSTRATIONS OF THE EGGS OF BIRDS By **MR. HEWITSON**. 2 vols. 4*l*. 10*s*.

THE REPTILES, By **PROFESSOR BELL**. Second Edition, shortl

THE FISHES, By **MR. YARRELL**. Second Edition, 2 vols. 3*l*.*

THE CRUSTACEA, By **PROFESSOR BELL**. Now in Course Publication, in Parts at 2*s*. 6*d*.

THE STARFISHES, By **PROFESSOR EDWARD FORBES**. 15*s*.

THE ZOOPHYTES, By **DR. JOHNSTON**. Second Ed., 2 vols., 2*l*. 2

THE MOLLUSCOUS ANIMALS AND THEIR SHELLS, B **PROFESSOR ED. FORBES**, and **MR. HANLEY**. Now in Course Publication, in Parts at 2*s*. 6*d*.; or Large Paper, with the Plate Coloured, 5*s*.

THE FOREST-TREES, By **MR. SELBY**. 28*s*.

THE FERNS AND ALLIED PLANTS, By **MR. NEWMAN**. 25

THE FOSSIL MAMMALS AND BIRDS, By **PROFESSOR OWEN** 1*l*. 11*s*. 6*d*.

A GENERAL OUTLINE OF THE ANIMAL KINGDOM, B **PROFESSOR T. RYMER JONES**. 8vo. 1*l*. 18*s*.

---

* "This book ought to be largely circulated, not only on account of its scientific mer because it is popularly written throughout, and therefore likely to excite general at to a subject which ought to be held as one of primary importance. Everyone is int about fishes—the political economist, the epicure, the merchant, the man of scien angler, the poor, the rich. We hail the appearance of this book as the dawn of a nev the Natural History of England."—*Quarterly Review*, No. 116.

JOHN VAN VOORST, 1, PATERNOSTER ROW.